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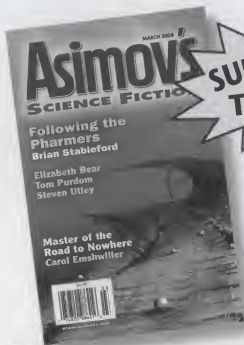
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SCIENCE FICTION

JULY 2010

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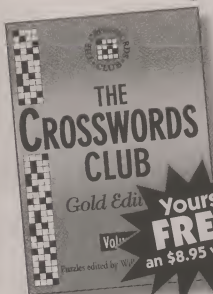
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OUT OF THIS WORLD

A few years ago, I was delighted to discover that in the tight quarters of the International Space Station, the small library of books, movies, TV shows, and music intended for "recreation/off duty consumption" includes a dozen back issues of *Asimov's* and *Analog*. The selections in the library seem to prove that astronauts really do read science fiction. Of the eighty-nine books listed, forty-five appear to be science fiction (another seven are fantasy). Lois McMaster Bujold and David Weber are heavy favorites, but works by Kim Stanley Robinson, Walter Jon Williams, Mary Turzillo, Harry Turtledove, Greg Bear, and other SF authors also command the station's precious shelf space. Astronauts who want to take a break from Fyodor Dostoevsky's *The Brother's Karamazov*, Charles Darwin's *Origins of Species*, or *The Federalist Papers* can also peruse timeless SF novels by Isaac Asimov or Jules Verne.

It's heady to think of an astronaut whiling away some downtime immersed in an issue of *Asimov's*. I can just imagine someone turning the pages of the magazine as they float in zero g. It's an image that I'm sure our founder, Isaac Asimov, would enjoy.

I have no idea how the library was compiled, but it's easy to presume that the books came aboard the space station a few at a time in the astronauts' personal belongings. Since the issues of *Asimov's* and *Analog* both date from a six-month period in 2004, it may even be that one of the astronauts was a subscriber who left his or her copies behind to entertain subsequent visitors to the station.

I'm always impressed by how many famous scientists attribute their early inspirations and enthusiasm for their fields to the works of classic science fiction writers. When I think of *Asimov's* orbiting the Earth, I am gratified that mod-

ern SF authors seem to be accomplishing the same thing. It's also gratifying to think that the people who are living the adventure that once upon a time existed only as tall tales spun by SF authors continue to appreciate those tales.

Of course, once I had the library's list of reading material on hand, it was impossible not to peak at it to see what other books are read by astronauts on space stations. I wasn't surprised to learn that in between reading *Asimov's* and novels by Dan Simmons and Catherine Asaro, astronauts returning from an EVA or who are finishing up a day spent grappling with fifty-five foot robotic arms amuse themselves with books by David Sedaris and P.G. Wodehouse. Novels of suspense by John le Carre, James Patterson, and Dan Brown were to be expected and *Failure Is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond* by Gene Kranz seemed a reasonable choice. I wondered, though, was the person who brought *The Ten-Day MBA* aboard thinking about getting into asteroid mining or looking for a career change?

This collection of physical editions of books and magazines made its way onto the space station before electronic readers were as ubiquitous as they are now. Perhaps the library has since been expanded to include thousands of e-books. I don't know if *Asimov's* is spinning around the Earth on a Nook, but I do know that electronic versions of some *Asimov's* stories now have an extraterrestrial home. As Allen M. Steele pointed out in his bio note for "The Emperor of Mars" in last month's issue, some of our tales were included on a mini-DVD called *Visions of Mars* that arrived safely on the red planet in 2008.

The disk, which was assembled by The Planetary Society, contains eighty stories and articles, as well as artwork and radio

shows. The material on it was first scheduled for a 1996 voyage to Mars aboard a Russian spacecraft. Alas, that ancient CD-ROM now lies on one of Earth's seafloors since neither the disk nor its ride made it out of orbit. Fortunately, this treasure trove of information was reproduced and launched for the fourth planet aboard the Phoenix on August 4, 2007.

Poring over the index of stories brings to life my earliest encounters with this most evocative of our planetary neighbors. I can imagine Edgar Rice Burroughs' *Princess of Mars* sharing space with the inhabitants of Ray Bradbury's *Martian Chronicles*. I'm sure Roger Zelazny's "Rose for Ecclesiastes" is still breaking hearts. I'm glad Tom Dish's *Brave Little Toaster* has finally really gone to Mars and relieved that Theodore Sturgeon's tragic "Man Who Lost the Sea" made it there too. Kurt Vonnegut's *Sirens of Titan*, John Varley's *Martian Kings*, and Jonathan Swift's *Gulliver* may now turn to H. Beam Piper's "Omnilingual" before they embark on Stanley G. Weinbaum's "Martian Odyssey." Phil Dick can remember this for us wholesale and in the meantime, I'm sure Isaac Asimov's Max will always try to see what he can get away with while in Marsport without Hilda.

Six of the stories on the disk were first published in *Asimov's* in the eighties and reprinted in *Isaac Asimov's Mars* in 1991. These tales are "The Difficulties Involved in Photographing Nix Olympica" by Brian W. Aldiss, Gregory Benford's "All the Beer on Mars," Ian McDonald's "The Catharine Wheel," Kim Stanley Robinson's "Green Mars," Allen Steele's "Live from the Mars Hotel," and Lawrence Watt-Evans' "Windwagon Smith and the Martian." Another *Asimov's* regular from that time, Lewis Shiner, is represented on the disk by his translation of Japanese author Aramaki Yoshio's "Soft Clocks."

It's awesome to think that when astronauts board the space station or when settlers finally make it to Mars, they'll see first hand what the readers of this magazine already know—that the fiction in *Asimov's* is out of this world. ○

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THE SEARCH FOR OTHER EARTHS

"To consider the Earth the only populated world in infinite space," the Greek philosopher Metrodoros the Epicurean wrote about 300 BC, "is as absurd as to assert that in an entire field sown with millet only one grain will grow."

I believe that too, although the only evidence I have for its truth is the same as Metrodoros': simple common sense. He knew of five planets aside from our own—Mercury, Venus, Mars, Saturn, and Jupiter—and perhaps he thought they were inhabited, but also he could see that the sky was full of stars. He didn't have any telescopes to show him the existence of worlds of other stars, and neither do I. But the universe is infinitely large, as Metrodoros understood two and a half millennia ago, and that which is infinite contains an infinite amount of everything. It is a place in which not merely uncountable numbers of suns exist, but uncountable numbers of *galaxies*. To me it seems unlikely, to say the least, that in all that literally unthinkable multitude of galaxies there is only one planet, one little dinky world, on which living beings can be found.

For many centuries the concept of a multiplicity of worlds was dangerous heresy in Christian Europe. A literal interpretation of the Bible had produced the belief that God had created the world—flat, floating on water—in six days, and had placed the sun in the sky to provide light, and in that same week had created man and woman and various subordinate creatures to populate it. Earth was unique and at the center of the universe. There was nothing in Scripture about other worlds or other forms of life; therefore, such things did not exist.

The work of the sixteenth-century Polish mathematician Nicolaus Copernicus

began the process of undermining the concept of a geocentric cosmos. Copernicus showed that the Earth and its sister planets must move in orbit around the sun, rather than the sun going around us, as it appeared to do; but he mistakenly thought the orbits were circular, and it remained for the German astronomer Johannes Kepler, building on the work of a Dane, Tycho Brahe, to show that the planetary orbits were in fact elliptical. With the mathematical foundations now in place, the modern view of the universe began quickly to emerge. I suppose there are still some believers in the pre-Copernican theory of the universe, but very few, I suspect, are readers of this magazine; the rest of us have no difficulty with the notion that Earth travels around the sun and is just a speck in a vast universe full of stars and—very likely—a host of other planets more or less like our own.

That extrasolar planets exist is no longer theoretical. Our telescopes aren't powerful enough to show them to us, but in one indirect way or another we have demonstrated the existence of some 330 such worlds. (For lovely and plausible paintings by Lynette Cook of what these already discovered extrasolar worlds might look like, check out *extrasolar.spaceart.org/extrasol.html*. The ones located so far, though, have had to be big enough—Jupiter-sized, at least—so that their gravitational field perturbs the motions of the sun about which they move in a detectable way, and that means that they are too big to support the kind of life that thrives on Earth. That is not to say that no Earth-sized worlds exist out there, only that we are currently unable to detect their presence. But in an infinite cosmos there surely must be an infinite number of worlds, including some very much like Earth, and at this mo-

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ment we have a space-going telescope up above us, searching for those other Earths.

It's called, appropriately enough, Kepler. NASA launched it in March 2009, putting it into solar orbit at such an angle that Earth itself would not block its view of the galaxy. Because it is located in space, the images it collects are not subject to atmospheric blurring (the effect that makes the stars seem to twinkle, down here on Earth). A couple of months of tweaking were necessary before Kepler became fully functional, but it has been sending back data since July 3, 2009, and very likely some interesting revelations will have come forth by the time you are reading this piece, nine months or so after I've written it.

Kepler is not the only space-based telescope capable of spotting extrasolar planets. The French Space Agency and various European partners launched one in December 2006 called, in a nice Gallic cultural touch, COROT—CONvection ROTation and planetary Transits. Within five months it had sent back data on its first discovery. But COROT is best suited for detecting planets greater in diameter than Earth. As for our Hubble telescope, it was designed for other uses than the quest for extrasolar planets, and does not remain focused on any one star group long enough to gather the kind of information needed.

Kepler, though, has a fixed field of view that continuously observes more than 100,000 stars in the constellations of Cygnus, Draco, and Lyra. These constellations were chosen because they lie outside the plane of the ecliptic and thus will not be hidden from Kepler's eye by sunlight. During its lifespan of some 3.5 years, Kepler will be looking for planetary transits, the passing of a planet in front of its star. Such a transit would cause a temporary reduction in the star's apparent brightness; the transit of an Earth-sized planet, for example, would briefly reduce the observed magnitude of its star by 0.01 percent. We can't detect such a minute fluctuation with Earth-based telescopes.

But Kepler can, and because its gaze is constantly fixed on the same stars it not only can take note of the movements of such relatively small worlds but keep track of the interval between transits, from which the size of the planet's orbit can be calculated and even some conclusions thus drawn about its climate.

Kepler will need to record at least three planetary transits to make certain that it is a planet that is causing the dimming, and not some random fluctuation of the star. Thus the first reports from Kepler probably will tell us about planets hundreds of times as big as ours, moving in orbits relatively close to their stars, since those are easiest to detect. Anything living on such a world would have to put up with immense gravitational forces and searing solar radiation, and, therefore, whatever kinds of life-forms such planets might have—animated balls of plasma, drifting networks of pure energy, whatever—will not be anything like those of Earth. For the time being, thinking about such beings must remain in the realm of pure speculative fantasy. Even when Kepler begins locating smaller worlds, the ones that have the sort of gravitational pull and geological structure that would make them habitable by Earth-type life, it will be necessary to consider that those that move in orbits extremely distant from their suns are likely to be chilly places, unsuitable also for Earth-type life, and those that are very close will be too hot. We know enough about our own solar system to understand that only one of its nine planets (or eight, if you are a Pluto-denier) can support our kind of life. But there's no doubt that the universe is full of planets, and that one chance out of nine, if it carries through everywhere, yields the realization that the cosmos is teeming with habitable worlds.

What conditions are needed, after all?

There are three basic requirements for the development of life on any planet: a building-block substance chemically able to join with other elements to form complex compounds, a solvent in which

atoms and molecules can move about freely to take part in chemical reactions, and the chemical reactions themselves, resulting in the production of energy, so that the vital processes of life can occur. On Earth the building-block substance is carbon, the solvent is water, and the energy-producing chemical reactions are brought about by oxygen. Other combinations are possible, though: carbon and ammonia and nitrogen, for example.

Temperature is also a factor: if a planet is too cold its water turns to ice, too hot and it turns to a gas. Therefore the planet must be at the proper distance from its sun, and the sun itself be neither too bright or too dim. If we discard from our reckoning the stars that are too small and the stars that are too big, we find that we have rejected seven stars out of eight as possible sites in our galaxy for life-bearing planets. But that still leaves a nifty twelve billion stars, just in this one galaxy. If half of them have solar systems, and half of those have planets that lie at the right distance to maintain water in its liquid state, and half of these are the right size to retain an atmosphere, a billion and a half planets remain. Rejecting half a billion of those because they are too big, because they don't rotate on their axes, because they have no water, or because they are otherwise unsuitable, we still have five hundred million Earth-type planets in our galaxy alone! And there are millions of galaxies.

Leaving out of account the chances of the existence of really alien life-forms—

based on silicon instead of carbon, or using ammonia rather than water as a solvent, say—the probability still seems overwhelming that the universe is teeming with life. Some worlds may be populated only by simple one-celled creatures, others may be swarming with fish and crustaceans, others may be worlds of insects, of amphibians, of reptiles, and some may hold intelligent civilized beings, possibly far beyond us in their achievements. All of that is probable. What isn't probable is that there's nobody else around at all.

You may ask—especially if you are the sort of person who keeps the makers of flying-saucer movies busy—why they haven't been in touch with us, then. The simplest answer is that the universe is very big, traveling between stars would take so much time that it seems hardly worthwhile (or even feasible), and the chances that any of those distant interstellar civilizations would notice that we are here and worth visiting are very small. Until the development of faster-than-light space travel, itself a very low-probability concept, we ought not to expect any contact with the other intelligent races of the galaxy.

But it still would be of some interest to know where they might live. The first step in finding out where our neighbors could be has now been taken. Perhaps by the time this column sees print, the Kepler telescope will have sent back the first snapshots of those other Earths far off in the heavens. ○

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Alice Sola Kim lives in San Francisco. Her short fiction publications include stories in *Lightspeed*, *Strange Horizons*, *Lady Churchill's Rosebud Wristlet*, and *The Year's Best Fantasy and Science Fiction 2009* (Prime Books). Alice attended Clarion West and in 2005 she was the second-runner-up for the Dell Magazines Award for best science fiction or fantasy story by an undergraduate college student. Her first tale for us is a pitch-perfect portrayal of an insecure high-school senior's attempt to cope with the SATs, an unstable parent, mean girls, college applications, and especially . . .

THE OTHER GRACES

Alice Sola Kim

See: I don't even need to wake you up anymore. Maybe you're exhausted, your eyeballs feeling tender and painful and peeled of their membranes, but when the alarm goes off at 6:00 AM, you jump out of bed and skitter across the chilly floor to the bathroom.

Every morning is thrilling; every morning you make an effort because this might be the day. It is April and you are a high school senior. Very soon you will be getting the letter that tells you that you've gotten into an Ivy League college. Any Ivy! Who gives a shit which one?

It wasn't easy to get in. You're all wrong for them. Your parents didn't put on identical polo shirts and take you on winding car tours through the Northeast to check out Princeton and Yale. No, you're part of the special category, species, family, genus, *thing* known as yellow trash. Yellow trash aren't supposed to go Ivy League—you've fooled them all, you cheater, you fake! Get ready for your new life.

It's all so thrilling. Too bad you thought you couldn't write about that in your college application essays. All of the things that make you what you had decided should be called yellow trash—the shouting matches in motel courtyards, the dirty hair, the histories of mental illness, the language barriers, the shoes, the silver fillings.

Grace, didn't you know? They eat that shit up. But you wanted a real do-over. You didn't want to be admitted only because they knew what you were. You like to think there's some honor in that.

Even though you may or may not have cheated on the SAT.

Breakfast is last night's dinner of chilly white rice and kimchi, which keeps your stomach full and your breath nasty, good things for a city girl on the go without a car. You like to think that this blast of prickly, fermented stink-breath might some-

day protect you from the next weirdo at the bus stop who sidles up to you to ask, "China or Japan?" So far, the most you've been able to do is flick up a middle finger in conjunction with a spat-out "America, asswipe!" And even that you've only been able to pull off once, but hey—good for you. If you were born unable to be pretty and quiet, then be loud and smelly. Own it.

When you leave the house for the day, your mother is gone and your brother is still at work. When you return, your brother will already be perched on the couch, watching TV. You pause at the door and rest your head on the jamb. The house is so quiet, all yours for now, and you will miss it.

Catch the bus, Grace! The bus!

It takes two city buses to get to your high school. You had started there right before your parents got divorced. You could walk seven blocks to go to a nearby, similarly shitty high school, but faced with the choice of shitty-familiar and shitty-new, you chose shitty-familiar.

Running across the street, you jam the hood of your sweatshirt over your damp head, creating tropical conditions under which your hair will steam and saran-wrap itself to your skull before giving up and drying itself. Why do people even use hair-dryers? They make you go deaf. You're just happy to have shampoo. It was not that long ago when your family could not afford shampoo and so used soap. People—as in, other ten-year-old girls—noticed. Perhaps being poor either turns one into an animal or a classy ascetic with eye-popping cheekbones; it made you into an animal, the fur on your head as oily and felted as a grizzly's.

The bus comes; you lunge inside, stepping tall; the doors slide shut like folding arms. On the sweating brown seat, you pull out a book to read—a charming little volume titled *Science Fiction Terror Tales*—but instead you wedge it under your thigh and close your eyes.

Last night you dreamed a familiar dream, so familiar that all you have to do is drift off in order to call it back. It's a Grace convention up in there, populated with girls and women who look exactly like you. GraceCon always meets in a different location—in hammocks that don't connect to anything you can see, a rainforest, the bottom of a swimming pool. Last night was the swimming pool. Graces were turning somersaults, sitting cross-legged on the bottom of the pool, knifing through the water. You just hung there, inhaling as if the heavy blue water was both fresh air and a nice cold drink.

Always, in the dreams, the Graces look at you and they go, "대황. 대황 대황 대황." You ask them, "대 황?" Your accent is perfect. You sound like an ingénue on one of those K-dramas that your mother's addicted to. "대 황," they answer. In the dreams, you understand every word.

On the bus, when you jerk awake, your face feels tired. It's the same way your face always felt after elementary school slumber parties—your eyebrows were unused to being hoisted so high, and your mouth-corners felt as though they had been pushed wide and pinned. Back then, your face didn't move much; when anyone in your family smiled, your pops got paranoid. He thought the joke was on him; now it is; it is.

Origin story. You first figured out that you were yellow trash when you were thirteen and attended a summer music day camp two hours away, in a nice neighborhood with a good school district. We both know that you're not that good at the violin. But already you were thinking about college applications, and searching for cheap and easy ways to make yourself appealing to admissions officials.

Anyway, you were getting off the bus in that nice neighborhood when the handle of the violin case slipped out of your hand. You stopped to wipe your sweaty hand on your T-shirt. Someone pushed up behind you and said, "Out of my way, chink."

Who does that? Surely the dickhead utterer of such words must have been green-skinned, a thousand feet tall, dragging a spiked club behind it as it picked and ate its own boogers. But, no, it was just some pretty white girl, a little older than you, high-ponytailed and tall. She didn't even look at you as she walked past. It was all so very racist that you felt as though you were watching a movie of yourself. A movie about racism! Oh, but for you it was playing in Extreme Feel-O-Vision, in that you felt everything, all the hurt and shock, and that despite your best efforts to blend in, to embody a Whiter Shade of Asian, this thing just happened to you, it had happened before, and it would happen again.

It was unfair how everyone could look at her and not see a—let's be blunt, Grace, a *racist asshole*—but just about anyone could look at you and see a chink.

You walked to the middle school where the music camp met, and spent a few minutes in quiet shock as everyone around you chattered and warmed up. Ann Li, who played the cello, asked you what was wrong.

"Someone called me a chink on the way over here," you said.

Ann opened her mouth, so you felt encouraged to spill. You said, "I didn't even do anything to her. I hate people."

"Wow," she said. She gave you a look of pity. "No one's ever called me a chink before."

At this, you crumpled like a soda can. *Never?* Bitch, please! You thought: if you believe *that* then I have a very lovely, like, pagoda to sell you. Admit it, you wondered how it could be that you got chinked about once a month but Ann never had in her entire life. Wasn't there enough racism to go around?

It was then you realized that there are many different kinds of Asian girls. one kind is Yellow trash; that is what you are. No matter how you brush your hair and wear Neutrogena lip shimmer and speak perfect English with nary a trace of fobbi-ness and play a string instrument like, say, Ann Li, you are not like her and you will never be like her, because you are yellow trash and *people can tell*. Even if it takes them a while.

Because at first they only see an Asian girl carrying a violin case, and if they think about you at all, it's to wonder at what a dweeby little princess you must be. But then they realize that the violin is borrowed from the scanty school music equipment room, deep scratches next to the f-holes as if Wolverine himself had given classical music a brief try before roaring in frustration, that you can only ever understand about half of what your parents are saying (if that), that your father is a nutcase, that your mother—who, let it be known, is amazing at her job—periodically has clients who want to speak to her manager because does her manager know that *this woman totally cannot speak English?*, that your brother likes to spit on the floor inside the house, that you are trashy and weird and something is deeply wrong with you and it will never be right unless you do something drastic, like go away to an Ivy League college and return transmuted, if at all.

You like to think that the Ivy League is mystical, miraculous—that, in a biography, it erases everything that comes before it, or else imbues an ignoble childhood with a magical sense of purpose. And it goes without saying that it charms the life that comes after it.

Grace, you moron.

But I understand. Things were rough; you got single-minded.

Your high school is named after a Native American chief and is said to be one of the most ethnically diverse high schools in the state, which unfortunately gives ethnic diversity a terrible name because the high school is truly rubbish. They don't offer AP classes, which is a big part of what drove you to cheat on the SAT, because the SAT is then the only objective measure by which admissions officials will be able to

determine if your waving and withered cold hand is the one they want to catch and yank out of the sea.

(You've thought this through. You chew your nails, a lot, and spit out keratin explosively like so many bitten-off ends of cigars. You like to think you fret in style.)

The school day is a long gray expanse. At lunch, you sit in the hallway with some friends. Tama is your best friend here. Tama's half-black half-white, her skin paler than yours. She's stupid-pretty. Not as in ridiculously pretty, but as in pretty in a way that initially makes people think she's not smart, with her jutting upper lip and her lashes so thick they pass for eyeliner. You and Tama have an unequal friendship of the type where she is your best friend and you are probably not hers.

You break Fritos in your mouth and listen to Tama talk about her mother's new painting. It is something sexually explicit involving satyrs and plums. Tama's parents are both artists.

You pull out *Science Fiction Terror Tales*, an act that might be rude if you were there, but you are not there. They, your friends, like you when you're there, but they don't miss you when you're not there. I don't read science fiction anymore, but I like to watch you do it. You get so lost, Grace. You're split in two: you're immersed in a story about a man who is confused about if he's really a man or a robot (truth: he's a bomb), but you're also dreamy for the better days to come.

Right now, you're a weirdo in a hooded sweatshirt, a skinny girl shapeless but for a gigantic ass. Think of a boa constrictor that's just eaten a goat. Stand the boa constrictor on its pointy end. The goat, sliding deeper into its body in one thick lump, is your ass. The rest of you, in this example, is the boa constrictor, which was chosen because obviously boa constrictors do not have tits.

But someday, far into the future, you will look fine. You will have money to spend on your clothes instead of going to the thrift store and pretending that the stuff there is cool but really everything's been picked over by tattooed twenty-somethings and all that's left are racks of sad tank tops with droopy armpits and flared stretch denim. Your hair will be washed with shampoo like the snot of unicorns and cruel hairstylists who are rude to everyone else but kind and complimentary to you will shear you into acceptability. Someday you'll learn on your own the things that no one bothered to teach you. You'll be a lovely young woman.

Yes you will.

Riding the bus home after school, you think about those letters that might be in the mailbox right now. Why not? You've got a perfect 4.0 (albeit the easiest 4.0 ever), crazy extracurriculars, a brilliant essay all about, like, realizing stuff at important moments, and an SAT score of 2400. A perfect score.

Around this time last year, you received a strange invitation to join a group on a social networking website. The group was called The Other Graces, and when you saw its members, you looked around the library in a panic and scooted your chair closer to the computer. Because the other members of The Other Graces looked just like you, but older, all different ages and hairstyles and clothing.

Well, you joined. The next day, you received a message from Grace Prime, as she called herself. Grace Prime got right to it:

you have been chosen for a mentorship by the other graces
the other graces are grace chos from alternate timelines of a high fidelity to yours
we have decided to help you with your dream of acing the sat
in order to do so i will have to open a subspace corridor into your brain
please respond with your answer within two business days
all best
grace prime

You wrote back and asked her what a subspace corridor was and what it would do inside your brain. You told her that you needed more information before proceeding, duh. Grace Prime called you at home later that night. How she got your number you still don't know.

"It's a way of traveling between universes," said Grace Prime. "You won't feel anything. Well, you may experience a side effect of odd dreams, just here and there, but that's the nature of the beast. It's an invasion, dear. A kindly invasion. You don't need to be afraid."

The cordless handset rested on your face. You tapped your feet on the wall. "You'll all be inside my brain? For how long?"

Grace Prime's voice was old. Quavering-old, creaky screen door-old, gargling with Listerine for a thousand years-old. But strong and scary. "Once created, the subspace corridor remains open for a time before fading away. It has to close on its own. It'll take time, but eventually your mind will be all yours again."

"I don't want a bunch of strangers running through my brain." You laid back on your bed, stuck your big toe into a dent on the wall from that time you threw a desk drawer at it.

Grace Prime sighed. "Grace, privacy is overrated. Especially among those who've already thought your thoughts, or near enough. You think about that. We're no strangers. Think about what that means. Do you want a perfect score on the SAT or not? And those subject tests are killer. You've not exactly had a classical education. You need the help. But it's your decision to make."

You listened to the TV for a while. The way it sounded from the other room, the walls muffling its noise, made you think of someone being kidnapped. Oh, Grace: you composed an ecstatic letter in your head, like a *Penthouse* Forum letter except not to *Penthouse*: Dear *Amazing Stories*—*you'll never believe what happened to me . . .*

Then, slowly, you agreed to everything.

"Good," Grace Prime said. "You won't regret it. We get results. We change lives."

"Now what?"

"Now I tell you the truth," she said. "The subspace connection was already opened. It was the only way we could talk." She coughed, but not in an embarrassed way. "I'm sorry. I do hate to trick a Grace."

Your head jerked up, just a little. The phone stayed stuck to your cheek. "We're talking on the phone. You called me on the phone."

"Unfortunately not," she said. "Sorry."

The dial tone became louder, turned up and up, until it was all you could hear. And then you realized that it was all you had ever been hearing.

You never spoke to Grace Prime again. Grace Prime, ancient, weird, brilliant—you wonder how she's been. Moved on to another young Grace, you imagine.

She may have lied to you, but the subspace corridor worked. On the morning of the SAT, you got to the testing site and tied your hair back as solemnly as a kamizake pilot, sitting monolith-straight in a room full of slouchers.

The answers came to you unbidden, if not of you then from you. The room was silent but your mind was stuffed migraine-full. You wondered, as you do now, if the feeling of the panoply of Graces in your head, their voices as familiar as your own thoughts, is what it is like to be your father, who gets transmissions from a place he calls The Information Center. Sometimes you imagine how nice a place called The Information Center would be, so straightforward and honest, but then you remember that The Information Center only whispers lies to your father, lies that keep him awake all hours of the night, listening and scheming.

With the assistance of the other Graces over the subspace corridor, you aced test

after test after test—Molecular Biology, English Literature, World History, Chemistry. That is how it happened. That is how you know you will get into any college you want. You know.

I am still with you, after all these months—I *can't pull myself away*—and I know this too.

The price you pay is that you'll never know how smart you really are.

When you finally get home, you yank open the mailbox door, prepared to gut it of its contents. There's nothing in there. Your face is tingly and your clothes are sticking to you, sweaty and wet as a pupal skin.

As expected, your brother Luke is sitting on the couch, watching the History Channel. Your mother and father are short, good-looking people, and it's unclear who, if anyone, inherited their looks. Both of you are patchy and unfinished. Luke is twenty-four. He finished college in a prudent and cheap way, by attending community college for two years and moving on afterward to the state university. Yet here he is. It just goes to show that escape must be a drastic endeavor. Otherwise you will loop ever closer back to the source, an orbit decaying into sodden trash.

"Where's the mail?" you say.

He rolls his eyes your way. "Kitchen table."

There's nothing there but catalogs and bills. "Nothing for me?"

"Nope."

"Are you sure?"

He sighs deeply. You know Luke is tired from his nocturnal job, making X-ray copies for hospitals. He also works at a discount department store. But you think this is no excuse for being such a butthead, a terrible brother, a faker, a conspiracy theorist.

"Uh," he finally says. "Dad came by earlier. I saw him through the window. He took something out of the mailbox."

"ARE YOU KIDDING ME? WHY DIDN'T YOU STOP HIM? DID YOU SEE WHAT IT WAS?"

"He would have made me let him into the house," your brother says simply. "It was a big envelope. Stop fucking yelling."

The last time your father got into the house, he went around cleaning everything up, which meant collecting a bunch of papers and magazines from your and your mother's rooms and ripping those up. Then he walked around the living room and took all the Christmas and birthday and congratulations cards that your mother had received over the years and put on the walls and he ripped those up too. You came home to three big grocery bags full of ripped-up paper clustered neatly by the front door, and your brother in his room with the door closed.

Your mother's not much of a yeller, but that night she really went off on your brother, which at first appeared ineffectual because Luke already has the mien of one who has just been yelled at, regardless. But after that, he never let your father into the house again.

Standing there in the living room, shoes still on (and your mother would kill you if she knew!), you consider your options. You're not going to call your mother. It will only stress her out, and then she will stress you out, and then you will feel sorry that you ever said anything. After their divorce, you discovered that your father had given your mother some kind of head injury, years and years ago. It's hard to picture now. He is like King Mr. Head Injury himself now, a man who got knocked straight out of a world in which he is a millionaire and people are conspiring against him in buzzing clusters, into this world, where he's a bum and no one believes a thing he says. He's not capable of hurting anyone now, but you must remember: once he was.

You worry so much that this head injury might bite your mother in the ass in thir-

ty or so years. For now, her memory just sucks, kind of. She forgets when she's promised to take you shopping, because shopping makes her tired and always, always you demand far too much. Once upon a time she had three jobs (a main job at the shipping company, an occasional job at the nearby fried-fish fast food place, and the jewelry counter at JC Penney's on the weekends). Now she only needs one job, but the tiredness persists, deepened into something chronic.

It's also a language barrier thing—this occasionally drifty quality to her; after all, if your life began happening in the Korean language, you wouldn't be able to remember or express anything for shit.

You'll only call your mother when you tell her the good news about college. She'll be thrilled. She is the saddest and least trashy out of any of you. This is why life is hardest for her—you allow yourself to behave badly while she abstains.

"I need a ride downtown," you say to your brother.

"I'm busy," he says.

"It's the History Channel! They show everything five billion times!"

"Ancient astronauts," says Luke. "In the Chariots of the Gods. Chariots of the Gods." He grins stiffly and holds his head back in a way that makes him look seedy and double-chinned, unpleasantly taxidermied.

"Come on, Luke."

He's gotten into a state. He does this all the time and it is so awful. He'll repeat phrases from his conspiracy theory books over and over again, perform weird tics and squeaks (this is where the spitting on the floor thing comes in). You know he doesn't have Tourette's, you *know*, but he likes to act like he does. You will understand later that damage manifests itself in so many different ways. Later, you might have sympathy for Luke, with his fake Tourette's. Today, however, all you can think is that he is disgusting.

"Ancient astronauts."

"Shut the fuck up," you say, grabbing your backpack and moving out the door.

"Don't tell me to shut up," Luke says, suddenly angry.

You hate your brother! Yes you do, right now! You become even more furious when, turning back to Luke, you spy a glob of spit on the floor by the couch. He could stop himself from spitting in the house, but he just doesn't. The sight of it grosses you out but even more so it makes you feel existentially depressed and low and lonesome, all for your brother.

For there are times when you are near-friends, when you sit and watch *The Simpsons* reruns together and he forgets to spit on the floor and act crazy, or times when you ask him polite questions about his conspiracy theories and try to listen quietly, or times when he delivers unto you tiny kindnesses such as a new pair of ugly black socks from the department store where he works, but that's just not enough, it's not. The one time it's vital for you to get downtown very quickly and it takes about an hour to get there on the bus and the bus smells like poisonous butt-mushrooms when it rains (which it did last night), Luke completely shuts you down?

FUCK this STUPID family. You sail out the door; your brother gets up to lock it behind you; you kick the door; he opens it and yells at you again; you run away as the screen door squeaks shut and the door-door slams; and then, you assume, your brother lapses back into his History Channel stupor, because there's really nothing else to do.

You, as well as I, have had those times where you don't feel like trying anymore. You've thrown your SAT study books across the room. Big, flimsy blocks—they don't make much noise when they hit. You've laughed at your own words in the application essay: wah wah, please take me. I'm ethnic enough for you. But not ethnic in all

the wrong ways. I'm poor enough for you. But not so poor I can't pay (let them find the truth out later).

You've made your blood go hot and speedy at the thought of what these colleges have done to you without their knowing it, making you bow and scrape, making you rewrite and redo your life, until you want to cursive your anger across the skies, or better yet, hack those .edus to scrawl in crude MS Paint on the home page banners I WOULDN'T GO TO YOUR FUCKING SCHOOL IF YOU PAID ME A MILLION DOLLARS TIMES A BILLION DOLLARS SO YOU CAN EAT MY ASS KTHXBYE. ALL BEST, GRACE CHO.

And yet, and yet. Every time, you picked up the books and brushed them off. You read each sentence in your essay aloud, searching for the perfect words, tamping down the parts of your brain that cringed at your asshattery, your mendaciousness.

Because:

Remember your brother. Remember your father, remember your mother.

Remember the Asian imposters at Stanford. Two recent news stories made you laugh, they scared you so much: an eighteen-year-old girl named Azia Kim (Azia? Seriously?) posed as a Stanford University freshman for almost a whole year. She lived in the dorms! She joined the ROTC! Just a week after, a woman named Elizabeth Okazaki was discovered to be posing as a visiting scholar in the physics department at—yes!—Stanford again, hanging out at Varian Physics Laboratory and accomplishing the heroic feat of being even weirder and creepier than a pack of physics grad students. Azia and Elizabeth were both kicked off campus.

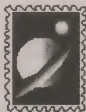
To a certain extent, you had to admire them. They were too dumb or unlucky or crazy or poor to realize this one stupid dream of theirs, but that didn't stop them.

To a much greater extent, you had to separate yourself from any identification with them, because you were getting into college in a legit way (or, rather, your cheating would be so technologically advanced and devious that no one would ever find out), and they had ruined Stanford for you—you imagined campus police looking out for girls *just like you*, chasing you across the moist green lawns and under the Spanish tiles and demanding ID, except you were already late to class, and everyone was staring, and, and . . .

You didn't apply to Stanford.

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* * *

Your father's shelter is on the outskirts of downtown, in an emptied neighborhood scattered with unsuccessful coffee shops, corner stores, dead brick businesses, and bus stops. The shelter is unobtrusive and looks like a tax office from the outside, except for a faded sign that reads FRANCIS-HOLT HOUSE. The buzzer is broken, so you wait outside the door, peering in through the glass until a resident spots you and lets you in. You've never seen him before—a middle-aged black man wearing a maroon T-shirt with a stretched-out neck.

After opening the door, he smiles kindly and says, "Would you like some money?" He opens his hands and all these dollar bills fall on the ground. You help him pick them up, and then go down the hallway to the elevator. When you pass the main office, you wave at the girl inside and tell her you're there to see your father. Of course you don't tell her why you're here and what you might do, so she smiles and says that he's up in his room.

Everyone in this house has got something weird with their heads. Which should go without saying, but every time you come here it's as if you've stepped onto a stage, into a company of committed improv actors who incorporate you into skits with Oulipo-type parameters of which no one has informed you; you're just playing but they are wholly serious.

You take the elevator up to the fourth floor. The hallway is stuffy. It smells of madness, which is something like the smell of people who don't have the right soap and products to get fully clean in the shower, and who wear clothes that come in huge batches from churches. You knock on your father's door. He answers right away.

You say hello, leaning to give him a careful hug.

He smiles. You haven't seen him in a few months, so every time you visit you fear that he'll look like just another bum, just another crazy on the street. Always, he looks okay. His hair is neatly parted, and he is clad in clean-as-is-possible slacks and button-down shirts. The thing about yellow trash that you remember is that yellow trash can be visually deceptive.

"Grace," he says. "대황 [you] 대황 [messy] 대황 [very tired-looking]."

Every time you see him you are relieved that he looks so good but he gets upset at how awful you look.

"How are you doing?" you say.

"Ah," he says, like ten light bulbs have exploded above his head. "대황. 대황 [Come in]."

Your father has mellowed out extremely. There's a night you remember, a long time ago, when he left home. You and your mother and your brother went to retrieve him and had a huge shouting fight in a motel courtyard. People were smiling as they watched. The same people that liked watching your family fight probably liked watching that show *COPS*. Why else would they smile?

His place now looks like a motel room, everything petite and self-contained, an answer to the question, *How little do you need in order to feel like a respectable human being in today's America?* You stand by the round table next to his bed. Your father is on medication that makes his feet dance forward and back in a shuffling samba. You looked it up; it's called tardive dyskinesia, and it is the result of an evil White Elephant party in which one gives up psychosis in order to win a case of pseudo-Parkinson's. All the way home from the library you chanted "tardive dyskinesia, tardive dyskinesia" until it turned into "retarded synesthesia," which could have been yet another mental ailment lying in wait for your father.

"Come on, Dad, let's sit down." You put your hand on his elbow and help him down into the chair. He doesn't need the help, but it makes you feel better and maybe him too. He used to harsh you out every time you saw him, especially back when he still

had money and his illness still seemed more like an overabundance of cruelty and suspicion than anything else.

These days, during the good visits, you two can walk arm-in-arm down the street to get tacos; this is something that never, ever would have happened before. So you have hope, now. Which is a terrible thing, Grace. I feel sorry for you.

"Dad," you say, "Luke saw you get some of the mail from our box."

He nods, and grins so widely you can see the spaces where teeth are missing.

"Was there anything for me?"

He opens his black satchel, which he keeps clean and polished, and pulls out a big flat envelope.

On that envelope are the colors of a school you've dreamed about. Inside that envelope must be a Yes, or at the very least a strong Maybe. Around that envelope are your father's fingers.

He says, "I am very proud of you," a sentence that you can understand in English or in Korean. You bask in it, you do, his pride and the fact that you finally understood something completely. Everything's so tenuous. Everything's about to be undone.

"Thanks, Dad," you say. You and your father smile at each other, and he reaches over to pat you on the shoulder. "Can I see it?" you say.

"No," he says loudly, "대항 대항 [keep safe] 대항 Information Center. 대항 대항."

He slides the envelope back into the satchel and rests his arm over it. "대항 [this is] 대항 [very good school]. 대항 대항 but you careful. 대항 대항 Information Center 대항 대항 대항 [your mother] 대항 대항 대항 대항 Catholic Church 대항 대항 대항 대항 대항 lawyer 대항 대항 대항 대항 대항 [money] 대항 대항 대항 대항 대항 대항 Luke 대항 대항 대항 대항 [millions] 대항 대항 [television news anchors] 대항 대항 대항 대항 sometimes you are not smart 대항 대항 대항 대항 [I need to make you study] 대항 대항 대항 대항 I will call school 대항 대항. I'm coming with you. We go together."

You know that's not true and he can't, he just can't. It's all crazy talk. How's this guy going to get on a plane and follow you anywhere? He couldn't even ride the bus if he didn't get a pass from the shelter.

But at the same time everything he is saying is so true that your heart and your head want to explode. You feel like crying, but your body is set up to not-cry, it's set up to shunt that impulse into thinking about crying, all the crying you will have to do later, in your room at home. But by then it will be all gone. That's the problem with saving it up.

"Okay? Okay?" he is saying.

Heliumed with despair—because despair can make one oddly light, isn't that right? Everything lost, and what remains is so stupid and pointless it's lighter than popcorn—you rise up and stand over your father. He is small and thin in his paper-bag-cinched slacks and you feel huge. You're taller than both of your parents because you were bred on meat and white bread and hateful, indigestible milk. This can happen to guys who are afflicted with Bad Dads. They take it until they're fifteen, sixteen, until they discover that they're big enough to start hitting back. You're a girl, but over the years you've been getting angry and big too. So slowly that you had no idea it was happening.

He looks up at you. The reds of his eyes are showing, the skin underneath them lymph and bagged. "Why you are so bad to me," he says.

"I'm not bad," you say.

"You know what happen 대항 대항," he says, "You don't help stop. You blame me."

"I don't know what to stop, Dad," you say. You're sinking again. You sink lower, catching your head in your arms, entirely exhausted.

There are things you've got to do now. You're too tired to do them. You've got to call the school and ask them for another packet, have them send it to your high school or your mom's workplace. They'll say, "Why?" maybe, and you will tell them a lie. Or

maybe you'll say, "None of your fucking business!" and slam the phone down and then they'll un-admit you. Maybe it's all your father's fault that you are yellow trash and you will stay that way forever, but there must have been some way things could have been better. A way that is lost now. Plenty of people deal with plenty of things and they don't turn out trash.

He reaches into the briefcase and takes out the envelope again. This time he opens it and pulls out the letter to show you. He hands you the letter. It's nice. A seal's been punched into the paper, and someone is congratulating you. You barely read it.

"That's fine," you say, and slide it back to him.

The letter's not the thing. I told you, Grace. This story ends well, so never you worry; you don't need the fucking letter anyway. You're in, you're in, and no one can tell you that you're not. Don't cry please.

He says, "You study law, or medicine. If you study law you can do English too in undergrad 대학 대학."

"Uh huh." A wailing rises up in your head.

Your father talks about getting an apartment—or, hey, even a house, because he'll have money to burn—near the campus, where he can visit you every day. And there comes a moment when you almost wish it could be true, all these delusions of his—houses and money and college degrees for anyone who wants those things so badly that they've dreamed themselves onto the streets and into homeless shelters.

"We can get cat or dog," he says. "대학 [which do you want?] 대학 대학 cat is cleaner."

"I hate cats," you say. This is the worst. A pet. Something he could very nearly have. But he will never, ever have a pet.

"대학? [What?]" he says.

"I like cats."

"Ca-li-co," he says, "대학 [those are the prettiest]." How does he know that word?

Forget a wife, and kids, and a life to keep warm and solvent—I can't even imagine this man taking care of a pet. Suddenly I laugh. It surprises even me, but you get pissed off. You shake your head. That's enough, you think, no more looking. No more judging. Suddenly you lift a fist and punch the side of your head with a loud, inorganic-sounding thock. Inside your skull clangs and aches. It surprises even me. Get out, get out, you think. Go away.

Doing something crazy in front of someone crazy is interesting; you wonder, how will they explain this? Your father is staring at you with wide eyes, and you know he's not getting up to help you. He's figuring out how this all fits into the connected flow charts and diagrams and blueprints and toppling spires in his constructed world. Someone's gotten to his daughter. Someone's put poison into her drinking water and made her go crazy. His daughter is not his daughter.

"Dad," you say, "When you hear the Information Center, do you—"

But you interrupt by hitting yourself again. *Go away go away GO AWAY*. This time it takes. With a shock, I realize that it's my turn to feel, and what I feel is this: me and everything else receding into a rapidly shrinking circle, a tiny angry pupil.

The corridor's closing; I'm an ant up a vacuum cleaner.

Then I come to, and it's just me, all me—alone in my fancy house, chair tipped back onto the floor. There's a broken glass beside me. I want to see how it ends. But I think I know how it ends. I think it's you who doesn't, Grace. My back is killing me. I get up from the floor; I stumble to the kitchen and palm some pills down my throat and drink cold water from the dispenser.

I look at the clock on the wall.

Only minutes have passed for me, just a few of them, but for you, oh you, Grace, for you it's been years and years and years. ○

THE GEARS OF NEW AUGUST

One of his purple calves
had worked through the fence
and strayed too close
to a flesh-eating tree.

Already half-consumed,
its limp hindquarters
hung from the serrated pod.
The old man leaned heavily

on the rock corner post,
while the steady rays
of the encroaching suns
seemed to rake the air

like nails on a washboard.
His face resembled the barn
he'd built the first year,
now weather-brown and worn.

His eyes were dim pools,
flakes of dried mucus
at the corners like clouds
that never left the horizon.

Summer had rusted out
in the gears of New August,
the engine of the seasons
stalled in an alien drought.

In another month he would
reap his bitter harvest
and await the supply ship,
with little to offer.

He glanced up expectantly
as the wind began to shift,
but it only bogged down
and bucked like an old

pick-up he could still
remember driving through
the green hills of Earth,
dreaming of the stars.



—Bruce Boston & Todd Hanks

HAGGLE CHIPS

Tom Purdom

Tom Purdom tells us he “continues to pursue the life of your typical, run-of-the-mill science fiction writer/music critic. I attend two to three concerts per week and three or four science fiction events per month and write about the poignancy of Brahms’ piano trios one day and the economics of interstellar commerce the next.” Readers can find out more about Tom at his website, www.philart.net/tompurdom.

It was a very civilized highjack. Janip was riding over the wilderness in a small airship, en route to his first meeting with his customer, and the attack began when a flock of flying creatures rose out of the leaf tops and drove straight for the ship. Janip knew something was happening as soon as he realized he was looking at birds. There were no natural birds on Conalia.

The birds ended their drive in a suicide attack on both propellers. The airship came to a halt. Two birds with absurdly exaggerated wingspans descended from some vantage point in the sky and hovered about five hundred meters from the starboard windows—well beyond the range of any weapons Janip might be carrying. Their wings measured a good ten meters, tip to tip, and they were both carrying small two-handed creatures with brain-machine links fastened to their heads. They banked downward as soon as they had given him a good look and disappeared under the gondola.

“I have encountered a difficulty,” the airship said. “I believe I am under attack. I have signaled for help.”

Janip settled into his seat and transmitted messages to two addresses. He was the only passenger in the gondola. His customer had chartered the ship just for him—an extravagance that indicated he could have negotiated a higher price when they had haggled over the merchandise he was carrying.

The ship quivered. It floated upward for a second and stopped. The birds’ passengers had obviously attached contacts to the bottom of the gondola. The ship’s control system was trying to gain altitude while it fought a silent battle with an electronic invasion.

The gondola trembled again. The two oversized birds flapped into view, one on each side.

“Good afternoon,” the ship said. “Your ship is now descending. The two riders positioned on the gondola are both armed. They can enter the passenger area at any time and administer a pacifier. Or you can indicate you are willing to follow instructions. The choice is up to you.”

Janip glanced out the window and verified the leaves were getting closer. A wash of enforced calm settled over his emotions. He had experimented with uncontrolled passion when he had been in his twenties but he had installed a full suite of neurological emotional controls when that bit of youthful probing had reached its predestined end.

"You will not encounter resistance," Janip said. "I can see you've taken control of the situation."

The gondola brushed against wide dark leaves. There were no real trees on Conalia. The tallest organisms on the planet were essentially giant soft-bodied plants. The ship pushed them aside as it descended and hovered a couple of meters above the ground. The rear hatch swung open. A ladder extended.

"If you will please descend," the ship said, "it will save us the trouble of boarding."

A man and a woman stepped into view as he backed out of the hatch. They both had functional, sparsely utilitarian brain-machine links on their heads and swivel-mounted laser-electric stunners in their hands. Sighting glasses hid their eyes. They escorted him to an all-terrain vehicle with oversized wheels and Janip entered the first stage of his captivity.

His captors drove him to a compound on the river. They ushered him into a large, lightly furnished room and left him alone for three days.

They didn't tell him why he had been kidnapped, but it didn't take him long to figure it out. His communications implant still worked and they didn't try to jam it. The face of his account manager at Kaltuji Merchant Bank hovered in front of him minutes after the door clicked shut. Margelina had been the second person he had contacted when the attack had begun.

"You're in the compound established by the Taranazzu Cultivators," Margelina said. "I think we can assume this has something to do with their dispute with your customer."

Janip scowled. "I thought the Taranazzu Cultivators were supposed to be non-violent."

"They are, ideologically. We're just as surprised by this as you are."

"I checked out that squabble when I started negotiating with my customer. Elisette's the party who looks like she might consider a little kidnapping."

"Elisette is already attempting to initiate negotiations. In the meantime, I can advise you we can let you have full access to our communications system, with all security mechanisms functioning. You can continue to conduct all your normal business and social activities, just as you have been. The only restriction will be items that can be used to help you escape. We have to maintain a neutral stance in all disputes. It's the only way we can keep secure communications open in this kind of situation."

"Can I assume my jailers will let me maintain communications unless you advise them I've violated the agreement?"

"We're working on that now. But I have to advise you we will immediately terminate your communications account if we discover you've violated the agreement."

"I'd be very surprised if you didn't, Margelina."

The top politician in the compound's social structure visited Janip late in the morning of the fourth day. The politician's constituents referred to him as their primary facilitator—without capitals. He was a large man whose clothes flowed over swellings and indentations that indicated his muscles had received the maximum enhancement he could impose on them.

Janip had held several discussions with his customer and she had given him her take on the primary facilitator. "Sivmati's settled into a very nice arrangement," Elisette had argued. "They're supposed to be egalitarian and non-competitive but you don't have to examine their accounts to see he gets an extra share of everything. He became a convert about a year after they established the compound. And gradually wormed his way to the top."

Elisette didn't have to tell Janip she shared his attitude toward politicians. People

like Sivmati didn't build. They didn't create. They didn't trade. They just worked their way up hierarchies.

The dispute between Elisette and the Taranazzu Cultivators was a conflict over hydroelectric power. Elisette controlled the biggest hydroelectric plant currently functioning on the planet. She and three of her friends had occupied the waterfall at Belita Lake when they arrived on Conalia and invested twenty standard years in the construction of the plant.

"We have no desire to harm you or anyone else," Sivmati assured him. "Or cause you the slightest inconvenience. The only person you should blame for this is Elisette. We settled here, by the rapids, because we innocently assumed the planet could use a second power source on this river. Nothing we have done should cause your client any loss of income. The new dam she is building upstream from us is deliberately designed to interfere with the flow of the river and negate our own efforts. It has no other purpose. She is building it because she wants to monopolize the energy potential of the biggest river in this area of the planet."

"Elisette doesn't need me," Janip said. "You have eight people on Conalia who can give her a perfectly good set of new eyes."

"But not as good as the eyes you're selling her. We know Elisette. We've been coping with her since we inaugurated our settlement. She's the kind who demands the best. Nothing else will do."

"And what are you going to do if she turns out to be more stubborn than you think?"

"We know she is going blind. We know she needs your services. We think you will be our guest for a year at worst. In the meantime you will be given whatever you need to carry on your business from here. And the full freedom to enjoy all the hospitality we can offer you."

Sivmati smiled. "This is a very pleasant place. We have every amenity. I hardly ever leave it myself."

It was a pleasant place. The Cultivators served the life-giving, nurturing Power postulated by the Taranazzu sect and their expressions of devotion included a healthy round of mandatory feasting and dancing.

The central tenet of the Taranazzu belief system was a rigid acceptance of everything mankind had learned about the physical universe. The theory that a single all-powerful god ruled the universe had become indefensible, in their view, as soon as human beings had discovered they were the products of the heartless process of evolution through natural selection. No loving god could have inflicted so much pain on his creation.

There must, therefore, be several Powers, the Taranazzu founders had argued. We don't know what these Powers are. It's possible we can't know. They may be superior beings, like the families of gods our ancestors imagined. They may be natural forces inherent in the structure of the universe. We must accept our ignorance. But we can choose the Powers we will serve.

The sexual mores of the settlement had their attractions, too. Janip got his first look at their system while he was eating his second dinner in the communal hall. The six people sitting near an ornamental fountain became involved in a discussion that kept attracting glances from the other tables. An outburst from one of the participants brought an immediate response. Two people hurried toward the commotion. A woman bent over a man who was glaring across the table. A man crouched beside the woman who was receiving the glare and nodded rhythmically as he talked to her.

The Cultivators had adopted a modified version of a sexual pattern developed by terrestrial primates called bonobos. Bonobo females used sex to regulate social behavior. The Cultivators felt both sexes should shoulder the responsibility. Touches and sooth-

ing words calmed the two diners. The dining hall had two small side rooms that could have been put to use if the situation had required a more extensive response.

As a "guest" Janip was a prime candidate for emotional regulation. Two women had invited him to join their table when he entered the hall. A third joined them a few minutes later.

The primary facilitator received his share of regulating, too. Janip wasn't surprised to learn that Sivmati had purchased the maximum sexual enhancement available on Conalia.

Elisette was a large, big-boned woman who liked to wear bright colors. She had started scheming as soon as she heard about the kidnapping. As Janip had assumed she would.

"We can discuss anything we want," Elisette said. "Correct?"

"That's my understanding of my agreement with the bank," Janip said. "I'd love to have a well-written program that would totally disrupt the Cultivators' security system, if you happen to have one handy. We can talk about the possibility all day. But don't transmit the program over this channel."

"And what will they do if we violate their rules?"

"I'll be barred from all contact with the planetary banking system."

"They can enforce that? They can make every bank on the planet follow their orders?"

"Against a lone visiting trader? Who's done something every bank on the planet would object to if he did it to them? My bank may be overestimating its influence, Elisette. But I'd rather not run a test."

Elisette shrugged. "There's a basic conflict between the general thrust of the Cultivators' ideology and the fact that they've kidnapped you and taken you prisoner. There must be a few people in that compound who feel our friend Sivmati isn't quite as pure as he should be."

"I've been watching for attitudes like that. Sivmati doesn't seem to think there's any conflict. He feels they're just defending themselves—that you're building your new dam so you can force them off the river and control the whole length of it. So far he doesn't seem to be running into any serious opposition."

"And what do you think?"

"I'm a trader, Elisette. You and I have a deal. He's interfering with a legitimate business transaction."

"That's what I want to hear. We'll get you out of there, Janip. I'm not the only one working on this. The whole business community in Kaltuji is seething. They all know they can't let a bunch of religious fanatics get away with this kind of barbarism."

Janip could have pointed out that she could resolve the whole situation, at any time, by announcing she was canceling her dam project. But why bother? Elisette had her objectives. Sivmati and his followers had theirs.

Janip had been born on a world that had passed through a nightmare created by a moral fanatic. The revolt that had toppled David Jammet's tyranny had killed hundreds of people. Personalities that might have lived for thousands of years had been snuffed out like deleted bits of data. Janip's own father had been killed before he could complete his second century. Janip existed because his mother had managed to save her husband's genome. She knew she couldn't recreate the dead. That was impossible. But she had to do something.

She had been a good mother. But no one could stop the flow of time. She had acquired other relationships. Janip had developed his own circle of friends. Inevitably, there had come a moment when he had known he could leave her behind. He had

lived through six decades of experience and he was still one of the youngest people on Arlane. He was faced with the situation that confronted every “young” person sooner or later. The top social and economic niches in his society were all occupied and the people who occupied them were still going to be perched on the same branches when he was plodding toward the end of his first millennium.

The eyes he was selling Elisette had been a cutting edge technology on Arlane. He had spent two standard years learning to deal with all the problems that could pop up when you planted them in a living human body with all its biological quirks. He continued developing his skills during the twenty tendays he had been imprisoned in the closet the starship’s owners called a minimum-fare cabin. The eyes would be a state of the art item on Conalia in a few standard years but for now he had a *de facto* monopoly. Just as he had a temporary monopoly on the lesser items he had selected before he placed eleven light years between himself and the haunted world that had goaded a woman into producing him.

Eleven light years in space. Eleven standard years in time. Two hundred days ship time as the ship pulled energy from the interstellar vacuum and pushed against the speed of light. His mother had lived through every minute of those years during the two hundred days he had kept himself busy in his closet. He had known that would happen since his first childhood contacts with elementary physics, but the reality still seemed eerie. Every friend he had left behind was eleven years older. The laws that governed space and time and the movements of starships were weirder than the most bizarre religions humans had invented.

David Jammet had taken control of the human settlements on Arlane so he could pursue a dream that had bedeviled mankind for seven centuries. Jammet had actually believed, in spite of all the evidence to the contrary, that he could produce human beings who had been cured of the human tendency to engage in violence. It was an experiment that had been tried eight times in the last few centuries and it always ended in disaster. The creatures who emerged from the laboratories walked around in human bodies but they were psychological monsters. The human capacity for violence was inextricably linked to every trait the species needed or valued. It couldn’t be sliced out of the human personality without damaging everything around it.

Janip was an interstellar trader. A visitor who sold the things he brought from another world. And bought the things he would sell on the next. People were always fighting over something. He wouldn’t exist if they didn’t.

The woman named Farello liked to sit on the observation deck that overlooked the river. She reminded him, in some ways, of the last woman he had bonded with on Arlane. She was tall and graceful and she maintained an air of good humored calm. The first time he noticed her, she was sitting at a table with two friends when he wandered onto the deck after dinner. The other women in the group invited him to join them and a pair of warm, interested eyes regarded him from the other side of the table as he traded light chatter with her companions. Her eyes were the primary memory he took away from the conversation.

He had been settling for whoever came his way. His “hosts” wanted to keep him placid and the women who accepted the task were pleasant and pleasurable. This one triggered something deeper. He even felt a twinge of jealousy when he sought her out two days after that first encounter and discovered she and one of the men were double-linked on a work assignment.

“They work together a lot,” the schedule tracker said. “They’ve got a high level of rapport and they seem to have a talent for spotting things that deserve a closer look. Would you like me to tell her you asked about her?”

Janip shook his head. He had tried to sound casual but he knew Sivmati was going

to hear about this. This was the first time he had indicated he was interested in a particular woman.

"I'll see her when I see her."

"They usually stay linked for forty-two hours when they're working together. They like to put in long work sessions and follow them up with long leisure periods."

Janip suppressed the temptation to check the work schedules. Sivmati would learn about that, too.

He "ran into" Farello the morning after her work session ended, when he wandered into the dining room in search of a late breakfast. She was sitting by herself, with a small plate of rolls in front of her, and she waved to him as she bit into a roll.

It was a sharp day in early winter but the observation deck had an enclosed area. They carried their plates and cups to the deck a few minutes after he joined her and settled into one of the easiest streams of conversation he had ever navigated with a female companion. Farello and her working partner had been connected to the network that monitored the settlement's impact on the natural, unterraformed ecological system that surrounded the compound. She briefed him on the things she had just learned about the interactions between two of the native plants and a network of communal leaf nesters, he countered with some observations about the different directions evolution had taken on Conalia and Arlane, and from there they moved on to all the anecdotes and tidbits you could toss into the flow when you were chatting with someone you had just met.

Janip knew he was emotionally vulnerable. His life had been disrupted. He was a stranger on a new world. No one had to tell him he was succumbing to one of Sivmati's manipulations. He had processed a quick calculation as he crossed the room toward her table and noted that she had made herself available at the earliest time he could have seen her again, if you assumed she needed to sleep for a few hours after her extended work period. Her wave had been well calculated, too. It had been friendly and pleasant but there had been no indication it was an invitation.

The interlude that followed their breakfast chat was just as warm and fervent as he had hoped it would be. She wasn't calming him. She wasn't rewarding him for maintaining the peace and stability of the group. She was responding to *him*.

He knew her emotions had been tampered with. No one reacted like that after two pleasant social encounters. But what difference did it make? Every situation had its pluses. Why shouldn't he take advantage of them?

Elisette even encouraged the relationship. "It may be something we can use," she said. "Sivmati may be playing with her need to bond. If he is, he could have set up conflicts we can exploit."

"You don't think she's just been enticed by my natural sexual magnetism?" Janip said.

"You have your attractions. But I think you can see that she's developed a fixation on you in a remarkably short time. Sects always attract personalities with a strong drive to form bonds. She bonded with the group. She bonded with Sivmati. He's probably enhanced her impulse to bond with you. The bonders that sects attract tend to be really strong—in the upper five percent in that area. She would be doing something for him and the group if she let him apply the modification. And she would be agreeing to reinforce a natural tendency. A tendency most bonders consider a virtue."

Janip had thought of Elisette as someone who had the brains to spot an obvious site for a hydroelectric installation and the tenacity to spend years working on it. Now he was beginning to realize she had qualities that went beyond that.

"Sivmati may know what he's doing," Elisette said. "Don't underestimate him. But we shouldn't assume he's a political mastermind just because he's managed to manipulate a bunch of sect adherents. Somebody who really understood personality

modification would have thought twice before he created the kind of conflicts he's set up in that woman. He's burdened her with a serious psychological stress if I'm right—the tension between her bonds with her group and the bond she's developing with you. Don't let up, Janip. Work on that bond like you were planning to make it last to the end of eternity."

Janip had decided the watchcats were the critical element in the compound security net. There were six of them and they patrolled the compound day and night.

"They've always got at least one cat within striking range," he advised Elisette. "I'll be dealing with a cat two minutes after somebody decides I'm making a break."

"I can get you a program that will disrupt the cats' programming any time you want it. Just give me the word. I can break it up into a hundred segments and hide it in many messages as it takes. Your friends at the bank will never notice it."

"They'll know we did it afterward."

"By then you'll be free."

"And what do I do after that? What happens when I land on my next world and the banks know I can't be trusted?"

"I need those eyes, Janip. I'm paying you to deliver."

"Can you send the program through some other link?"

"As secure as the bank link? Do you think I'd be paying the kind of money the banks are charging me if we had anything else on the planet as good as this link?"

The personal quarters building contained six suites that had been set aside for couples. Janip and Farello moved into a vacant set of rooms nine tendays after he began his sojourn at the settlement. The suite wasn't as big as the layout Sivmati occupied, but Janip liked the rugs and the heavy, ornately molded furniture the last tenants had installed.

"You sound like you're settling in," Elisette said.

Janip shrugged. "I may as well enjoy what's available. I spent three days in a decent guest house in between the jail cell I lived in on the ship and the camouflaged prison I'm living in now."

"And how about your companion? Are you planning to take her along when you leave?"

"I want to get out of here, Elisette. That's priority number one. If she wants to join me later—we can deal with that then."

Elisette studied him for a moment and let the subject die. Janip had given her the answer she wanted to hear. He was certain he had been telling the truth. But he also knew he hadn't really thought about the matter.

Elisette wasn't the only party who was negotiating with the Cultivators. The bureaucrats in the government of Kaltuji City had entered the conversation. They worked for a political system dominated by traders and economic hustlers. Kidnapings and acts of violence interfered with the civilized pursuit of wealth.

"They aren't making any threats," Sivmati said. "They're sending me the usual extremely polite messages. But we both know they can create annoying inconveniences for our community if they initiate the economic sanctions they like to flourish. But that's all it would be. Inconvenience."

Janip smothered his emotions under a blanket of bland serenity—his standard response to the useless rush of anger Sivmati usually provoked.

"Is that a message I'm supposed to relay to my banker?" Janip said.

Sivmati smiled. "I'm keeping you informed. Uncertainty can create unnecessary emotional stress."

Margelina received Sivmati's message with a shrug. "We know what his medical resources are. They're good but he's a long way from total self-sufficiency."

"Have you considered the fact that you're dealing with a religious community? People can be very stubborn when they feel they have to live up to a moral code."

"He's not David Jammet, Janip. This isn't Arlane."

"He could still hold out a lot longer than you might expect. And I'm the one who has to sit here while you make faces at each other."

Janip could believe Farello might be torn by the emotional conflict Elisette had hypothesized. But she had apparently resolved it by deciding the villain in the situation was Elisette, not Sivmati.

At Elisette's urging, Janip had linked to a second, lower-security network and used it to expand his social contacts and take his case to the general populace. Over three hundred thousand people currently inhabited the various settlements humans had established on Conalia. Most of them seemed to have an opinion on his situation.

Farello's contributions seethed with rage at the people who objected to her leader's tactics. To Farello, Elisette was an empire builder who wanted to seize control of an economic chokepoint. The Cultivators' power plant would have no impact on Elisette's plant at Belita Falls. Why shouldn't other people tap the river's potential?

We are a peaceful community. We are building a facility that will benefit everyone who lives on Conalia. The new dam Elisette is erecting has only one purpose—a monopoly on the resources of the river. Why aren't you threatening Elisette? Why are you directing your anger at a leader who is trying to protect you from her ambitions?

Janip maintained the most neutral stance he could manage. He had opened the second link so Elisette could slip him a clandestine program, if they decided they should activate an escape plan. He confined his public statements to principled arguments based on the importance of free trade, unhampered by political disputes.

We all understand the benefits of trade. People like me bring you things that become valuable, important additions to your society. We buy other things so we can eventually sell them elsewhere. Everybody gains. But we can't carry out our function if we can't circulate freely.

Janip had linked to dramas about men who became addicted to sexual liaisons with particular women but he had never taken the idea seriously, even when the links had fed him the physical sensations that were supposed to fuel the addiction. Some part of him had always remained detached. It was a fantasy that was just as unlikely as simulations crowded with women driven by an inexplicable need to give him anything his imagination could conceive.

Was it happening to him now? Or was he just reacting to his isolation? It had been at least forty years since he had thought about sex as much as he thought about it now. He would leave Farello after a three-hour session that should have quelled all his yearnings for a couple of tendays and his mind would start wandering toward their next encounter before he'd spent an hour looking after his business interests.

He could shut off his urges, of course. But he didn't *want* to. He had to force himself to make the effort. When he made it.

"I think it's time we set a date," he told Elisette.

"It's like I said, right? She let Sivmati focus her biggest need on you?"

"You want your merchandise. I want to get back to a nice normal place like Kaltuji where I can talk to people with nice normal interests like profit and pleasure. And there's only two ways that can happen. You can give them what they want. Or we can get me out of here."

* * *

Elisette's accomplices transmitted the program over three tendays, inside twelve hundred other messages, in twelve hundred packets randomly distributed. Sivmati might have hired break-in specialists who could follow the transmissions coming in over the second link, but their surveillance programs would have to spot a telltale code sequence in five of the fragments.

Janip loaded the fragments into his personal implant, but he left the program unassembled. He would assemble it thirty minutes before he started moving.

"You won't have time to run a thorough retest on the program," Elisette said. "But we have to take the risk. We have to assume they can monitor everything that comes through that link. And we have to assume they can run through the stuff stored in your personal system now and then."

Elisette owned two air cushion skimmers and she and her associates still used them to run between her installation and the settlements on the coast. Janip had even seen Sivmati return a wave when one of Elisette's companions had raced by the settlement while the primary facilitator had been standing on the observation deck.

"There's no harm in a little civility," Sivmati had said.

The Cultivators were fabricating turbines that would tap the flow of the river as it pushed through the narrows. The turbines would be planted on the bottom of the river, where they would have the minimum impact on navigation, but they were already constructing a canal on the opposite shore, for traffic that would have to bypass their installation.

Elisette decided the escape would take place just before dawn. One of her skimmers would position itself about twenty-five kilometers from the settlement. Janip would run toward the river at the appointed time, the skimmer would pull into position a few seconds before he reached the dock, and he and the driver would race up the river and present Elisette with her purchase.

Janip could have spent the evening before the escape working on his business deals. He could have settled in beside Farello after she had gone to sleep and drifted off without waking her up. She would reach for him in the morning, he would be gone, that would be that.

He had thought about doing it that way. He had known he should. He could even have picked a time when she would be immersed in one of her work sessions. He could have checked the work schedule and told Elisette she should pick a day when he would have the apartment to himself. But he didn't. He accepted the day Elisette chose and spent the afternoon with Farello, talking about all the things they talked about. They ate dinner alone in their apartment. And afterward he did everything he could to give her an experience that would dwarf anything she might feel when she discovered he had left her.

His sleep system eased him awake gradually, so he wouldn't make any sudden moves. He had placed a minimum set of clothes in the room he used for an office. The records and programs he needed for his business were all stored in his internal systems. The bank had backups, in addition, and he had cached backup storage devices in his clothes.

Lift yourself out of the bed one slow, calculated move at a time. Listen to her breathe while you stand on the rug. Pad across the room on bare feet. Slip into shoes, pants, and shirt. Watch the minutes change on your clock display.

Now!

The windows had been fabricated from an elegant solar-powered material that could reconfigure into a screen when you felt the need for ventilation. And yield before a steady push when you felt you needed an emergency exit. They had placed

him on the third floor of a three-story building, but he could reduce the drop by the time-honored method of hanging from the bottom of the window with his arms stretched above him.

The building had been surrounded with a border of native plants. He rolled onto his side when he hit but a sharp spike of pain advised him he had twisted his right ankle. He blocked off the pain and flowed into a run as he stood up.

The roar and crash of the rapids dominated the nightscape. Nobody had set off an alarm. No loudspeakers ordered him to stop. It wasn't necessary. The security system would have responded as soon as he pushed on the window. Cameras were watching his every move. Watchcats were racing across the grounds. Messages had awakened the people who had been assigned to security duty.

A cat trotted around a group of bushes. Yellow eyes regarded him. The cat angled toward him and he let it travel three more steps before he subvocalized four non-sense syllables.

He was holding his anxiety responses at the level they would normally reach if he was engaging in a competitive sport—a reaction that would keep him alert and fully rational. There was a moment when he actually felt his arms and legs start to knot up. The cat hadn't missed a step. Another cat had emerged from the shadows ahead of him and veered toward him with the same mechanical relentlessness.

The first cat rose on its rear legs and clawed at the air as if it was trying to scratch an opening in an invisible wall. He subvocalized the trigger again and the second cat covered three full meters before it shrieked and swung away from him.

Janip ran past the end of the quarters building and turned toward the river. The top of the skimmer ramp was only a hundred meters away. The first cat was still clawing at the air behind him. The second cat had settled onto its belly with its head swinging from side to side and its body bent into a curve.

They had opted for the simplest defensive program Elisette's sources could design. Once the program squirmed through the defenses around the cat's programming, it would overload the system with a blizzard of rapidly multiplying random data. The effect wouldn't last forever. The cat's defenses could shut it down and erase everything it had received from the time it started its approach. But by that time he would be clambering down the ramp toward the skimmer.

He was running along a walkway that curved through patches of ornamental shrubbery. Shrines displayed statues of the deities associated with the Power the Cultivators served. He thought he could hear a motor over the noise of the rapids but he couldn't be sure. They had decided he wouldn't communicate with the skimmer unless he had to. Ideally, the security team wouldn't know what he was trying to do until the skimmer pulled up to the ramp just before he started down.

He picked up the whirl of the skimmer's power plant as he galloped across the vines that covered the ground around the statue closest to the ramp. There was a gate across the ramp but he knew he could climb over it if it was locked.

A cat landed in front of the gate, stiff legs braced against the ground. A growl cultivated by generations of genetic designers brought him to a halt.

He knew he was probably wasting his time before he activated his defensive program but he subvocalized the code words anyway. The cat held its pose and he switched on his communications system and flashed a picture of the situation to the skimmer.

The response sounded matter of fact and unfazed. "I'll come up the ramp. Hold on."

The cat growled again. Janip looked around and discovered he and the cat seemed to be alone. Lights had switched on all over the grounds but he couldn't see any indication the security team had left the comfort of its posts.

It was possible the cat had recovered faster than they'd assumed it would. But there was another explanation that was less encouraging. . . .

The skimmer whirled up the ramp and stopped behind the gate. "Let's see what we can do with this kitty," the matter of fact voice said.

The skimmer was supposed to be equipped with a program that would confront the cat's system with an entirely different challenge. The pilot did whatever he was supposed to do and the cat rose on its hind legs. It flopped onto the ground with its back arched and Janip hurled himself forward. His hands grabbed the top of the gate.

Janip had absorbed hits from laser-electric stunners during a period in his early youth when he had engaged in mock battles with several of his friends. He knew what was happening as soon as he felt the shock slam through his body. It was a low-power effect. The gunner was positioned at least fifteen meters behind him. The charge had lost 30 percent of its power as it traveled down the tunnel of ionized air created by the laser. But it did what it was supposed to. A cat landed on his chest seconds after his back hit the ground.

They had known about the smuggled program from the start, of course. The cats had been responding to commands from their controllers when they had acted as if they were reacting to the program. Sivmati had applied a standard psychological technique. Let your victim think he's made it. Hit him at the last possible moment. Maximize his disappointment and frustration.

"I can understand why you might try that," Sivmati said. "I'd probably do the same thing. But we'd all be better off if we just presented Elisette with a united front. Let her know you've decided we're right. Tell her she won't receive her new eyes until she abandons her ambitions and dissolves every molecule she's added to her second dam."

Farello had been standing by the door when they escorted him back to the apartment. Two people from the security team had been propping him up. They had hit him with a second blast from the stunner while he had been lying under the cat. They dropped him on the bed and he huddled there by himself for the rest of the night.

He didn't call to her. In the morning he wondered if he should have. But he didn't. He stayed in the bedroom, after he woke up, until he heard her leave.

The first person he talked to was Elisette. She had left him a message minutes after the skimmer had left the ramp but he didn't return the call until he had spent an hour moping around the apartment.

"We knew that could happen," Elisette said. "We took the chance and it didn't work out."

"They could have stopped me at any time. I didn't see the people with the stunners but they must have been shadowing me all the time I thought I was clear."

"And now you're just as shaken as they hoped you'd be, right? Snatch it away right at the moment you think you've got it."

"They aren't going to give in, Elisette. They're just as stubborn as you are."

"What's your love interest doing?"

"She left before I got up. I haven't said a word to her."

"Find her. Talk to her. Get her back."

"After this? What am I supposed to tell her?"

"Tell her whatever you need to tell her. She's yours. She wants to stay with you. Give her the excuse."

She came back to him. Late in the afternoon. While he was still telling himself he had to think about the best way to approach her.

"I guess I'll just have to depend on the security system," she said. "I seem to have underestimated my personal charms."

She smiled. She gave her hips a little toss. It was a brave response.

"I didn't want to leave you," Janip said. "You're the only aspect of this whole situa-

tion that could make me hesitate. I'd just stay here and let things drift if you were the only consideration. I don't *want* to leave, Fari. I just feel I have to."

It wasn't the best speech he had ever offered a woman but she accepted it. She led him into the bedroom and the present blocked out the past.

Sivmati's surveillance programs had detected the defensive program while it was being transmitted and installed a neutralizer in the cats' systems. But there were hundreds of other programs Janip could use the next time he made a break. They just had to get one to him.

"You've got two possibilities," Elisette said. "We can transmit it through your bank. Or we can make a physical transferal."

"And there's no way an outsider can pass me something," Janip said. "Given the way I'm being watched. So someone else has to make the pickup. And we only have one serious candidate."

Elisette smiled. "We seem to have been thinking along the same lines."

"Not really. I've just developed some understanding of your thought processes."

"She's vulnerable, Janip. She's still vulnerable. She's probably even more conflicted than she was, after the shock you gave her when you tried to escape. Keep working on her. Keep strengthening the bond."

"And get her to where she's willing to betray her group just so she can keep someone who's going to leave this world sooner or later no matter what happens? That's a cruel thing to do, Elisette. She'll be in a turmoil for decades, no matter what happens."

"Do you want to stay there until you've gotten so worn down you start believing their sermons? I'm not giving in on this. That dam is going up. I can always get a temporary set of eyes while I wait for them to understand what they're up against."

Margelina was caught between Janip and her overseers in the bank. She stuck to the official position but she didn't hide her sympathy.

In the end, they always returned to the same issue. The bank had to think about the future. Janip had been given access to the ultra-secure communication system because Sivmati knew the bank would keep its bargain. If the bank violated its agreement for Janip, the next group of kidnappers wouldn't be so trusting. And the next kidnap victim would have to conduct his business over a less secure system.

"This isn't the last time we're going to have this problem, Janip. We're a new world. How would you feel if you couldn't use our system because your captors knew the last kidnap victim had violated his agreement?"

"Then send in a rescue force. Smash up some buildings. Kill some crops. Let them know you aren't going to tolerate this kind of behavior."

"We're looking at all the options. Kaltuji isn't a dictatorship. We can't plunge into that kind of action without a solid consensus."

"You've got influential people in your city who think you should let thugs and religious zealots disrupt legal business deals?"

"Sivmati knows what we can do. Elisette knows what we can do. We're a factor in every calculation they're making."

"Do they know what you're *willing* to do? I haven't seen much evidence they have to think about *that*."

Dancing played a central role in the Cultivators' communal life. They danced every night after dinner and they seemed to use every style of dance humans had developed for their mating rituals, from staid promenades to heated twosomes and floor-shaking communal stomps.

Janip had added the entire library to his internal programming when he initiated

his relationship with Farelo. They had practiced the couple dances together in private and he had managed to survive his first dance session without committing a fumble that disrupted a communal number. The implanted programs could give you an automatic grasp of the steps but they couldn't install the intuitive adjustments to your partners that Farelo had developed.

Sivmati was a practiced expert, of course. His straight back and hard stamps created a classic image when he joined a partner in one of the more vivid courting dances. His bellows and chest thumps dominated an all-male dance that bore a suspicious resemblance to a stylized combat. He did it with a smile and a proper touch of satire but his attitudes became the primary message of the event. The other men on the floor faded into the background.

If you drew a diagram of the human food chain, Janip had concluded, politicians would occupy the top perch. Soldiers and other experts in violence clutched the second rung. Creators and traders lit where they could. He had realized Sivmati was a politician but he had assumed Elisette belonged to his own class. Instead, he seemed to be caught between two of a kind. Sivmati reigned over a flock of religious communalists. Elisette wanted to turn a power system into an empire.

Janip slipped his arm around Farelo's waist and she smiled at him as he swung her through the first steps of a light-hearted couples dance that included mock displays of disdainful rejection. They clowning their way through the dance as if he had never attempted to leave her and she saw him as a friendly, good-humored source of fun and companionship.

Elisette was a customer. He needed her money. That was the heart of the matter.

"Our allies in Kaltuji have decided they can send a delegation," Elisette said. "They can claim their engineers want a direct onsite look at the facility the Cultivators are constructing. It's not a total fake either. There are people in the government who think they can set up a compromise if they get a better understanding of the things we're building."

"They're willing to plant somebody in the delegation who will make the delivery?"

"Just tell us where to drop it."

"And when. I still have to discuss this with the person who's going to pick it up."

"Give her an excuse. Tell her it's a business message. Indicate you're doing something a little underhanded."

"It's still a risk, Elisette. She can do everything we ask her and tell Sivmati, too."

"She won't. Give her an excuse. That's all she needs."

Elisette's face softened. She actually looked sympathetic. She was probably generating a high priced implanted simulation but Janip was surprised she could even manage that.

"You aren't to blame for this, Janip. You didn't put her in the bind she's in. Sivmati set her up. Not you."

Conalia was half a billion years older than Arlane, but the largest mobile organisms on the planet were essentially variations on the insect life found on other habitable planets.

Conalia was a low temperature "equatorial planet"—life flourished in a narrow band around the equator. Ice caps and frigid barrens covered 80 percent of its surface. The planet was still plodding toward the glories of reptiles and mammals, according to the most widely accepted theory, because natural selection had less to work with.

Other theories touted other explanations. But everybody agreed the native life forms were just as interesting as the fuzzier creatures that had evolved on more hospitable planets. Guests always visited the observation deck, even in winter. The

rapids seemed to foster large water creatures who could handle the currents. Spectacular eight-winged flyers skimmed across the whitecaps and skewered swimmers with telescoping spears. Snaky swimmers arched above the surface and attacked flyers. Clouds of famished smaller creatures descended on their overgrown rivals at predictable intervals. A visitor could paste a wafer under a railing and be confident no one would notice.

Retrieving the wafer would be a different matter. "I'm working on an especially delicate business deal," Janip told Farello. "The whole project depends on secrecy. Even Margelina doesn't know about it. Nobody in the bank knows about it."

"And you don't trust the bank's security system?"

"They're protecting me from intruders from outside their system. I'd rather not take it for granted they aren't watching me themselves. Not in this case."

She knew he was lying, of course. Elisette had been right. Farello didn't even ask him why she couldn't tell Sivmati about the pickup. He had prepared an answer if she asked that. But the question never came up.

Janip advised Elisette he was ready, Elisette negotiated with her contacts, the Kaltuji representatives negotiated with Sivmati, and Janip received a date. Sivmati would receive the delegation on a morning that was exactly three tendays in the future.

"It's the best they could do," Elisette said. "We are dealing with one of mankind's better experts at stalling."

"And he never once expressed any hostility. . . ."

"Or any sense he thought there might be something irregular about his relations with the rest of society. Kidnapping is just another element in normal business negotiations."

"You're telling me I have to keep Farello committed for another three tendays."

"Just keep on doing what you're doing."

Janip had been feeding Elisette daily reports on Farello's behavior, complete with a few minutes of visuals. Elisette insisted Farello would remain committed, but she wasn't the one who had to live with Farello's day-to-day mood swings. Elisette didn't feel the desperation in Farello's grip when she held onto him in bed. Elisette didn't have to cope with the emotions that assailed him when he saw Farello staring at her plate during dinner.

He just had to remind himself he hadn't created this situation. Elisette was right. Sivmati had created it. And Elisette.

Two of Sivmati's personal adherents loomed over the scene when the leader of the delegation inspected Janip's quarters and interviewed him about his treatment. Sivmati advised him his captors would appreciate it if he would stay away from the observation deck when the delegation was observing the action and Janip graciously agreed to abide by their request.

"I think you can see the problem," Sivmati said. "The platform will be crowded. There will be a lot of distractions."

"It's perfectly understandable. Don't let it trouble you."

Janip started worrying about the exchange as soon as they broke the connection. Had he done anything that might indicate the observation deck had some special significance? Had he been *too* obliging? Should he have Farello run over to the observation deck as soon as the delegation left it? And pick up the wafer before Sivmati could have the deck inspected?

The observation deck had the additional advantage that it was one of Farello's favorite locations. She visited it almost every day, just to spend a few minutes staring at the water, and she walked through it whenever she could when she was going

about her daily rounds. The security system would note that she had visited the deck but it wouldn't attach a flag to the event.

Farello couldn't complete the pickup as soon as the delegation left. She had to start a work session while they were still filing onto their boat. Janip spent thirty-three hours fighting temptation. He could have hung around the deck for hours at a time and made sure it wasn't being checked by a security team. It was a natural thing to do when Farello was working. Nobody would have thought he was doing anything odd.

Farello made a complete circuit of the grounds when she finished her work session. She had spent most of the thirty-three hours lying on a recliner, plugged into the housekeeping and maintenance system, and she needed the exercise. Later, after a nap, she would run ten kilometers. Now she just walked. And stopped now and then to stretch and suck in air.

She held out her hand as soon as the door clicked shut behind her. Janip hurried across the living room and pressed her fingers beneath his palms. They stared at each other across a gap that felt wider than the light years that separated Conalia and Arlane.

"I'm going to take a nap," Farello said.

Janip nodded. She pulled her hand out of his grip and he watched her as she walked toward their bedroom.

The wafer was clinging to his right palm. He slipped it to his wrist without looking at it and held it against the brown dot that marked the location of his main port. A *data stored* message superimposed itself on the image of Farello's retreating back—an image that made a perfect match for the conflicting emotions warring for his attention.

Elisette had started moving while the delegation was still visiting the settlement. She had loaded up a tracked all-terrain vehicle and headed inland with two horses on board.

"We'll come in from the land this time," Elisette had said. "Just as a precaution. Sivmati may not be the most astute tactician on the planet, but we have to assume he's set up some hidden defenses against the scenario we used last time."

Elisette liked to ride horses and she had developed an interest in the ancient sport of hawking. She liked to drive deep into the unterrestrialized wilderness and wander about on horseback, accompanied by her current paramour and an assortment of hawks she had programmed to pursue the livelier native flyers. Sivmati would know she was roaming the wilderness but he wouldn't see anything suspicious until she activated the last phase of her scheme.

The Cultivators had established their settlement on a shelf that lay between the rapids and the steep ridges that lined the river valley. The ridge formed a wall behind the settlement—a wall Janip couldn't hope to climb with determined pursuers closing in behind him. His escape route would follow a wide stream that flowed into the rapids downstream from the settlement, at the end of the shelf.

The stream ran through a narrow valley that sloped away from the river and created a natural pass through the ridge. Janip would run up the valley and Elisette and her companion would ride down it on horseback. They would make contact about ninety minutes after Janip broke out of the settlement, Elisette would hand Janip a weapon, and his pursuers would find themselves faced with three armed humans.

This time, Elisette's machinations included a backup plan. A skimmer would drive up the stream and provide an alternate pickup if the main scheme went awry.

"Tomorrow morning," Elisette said. "Before dawn."

"I want to go with you," Farello said.

They were lying on the bed side by side, holding hands. They had just spent most of an hour with their bodies joined, experiencing all the sensual excitements and emotional arousals they had added to their capabilities over the decades. It was an indulgence with a dangerous byproduct—you always emerged from it with deeply reinforced emotional bonds. Janip had slipped into it knowing he was yielding to a treacherous temptation.

"I know you're going to make another attempt," Farello said. "You don't think I really believed that story you told me, do you?"

"You need this place, Fari. Sivmati let you create an internal conflict. For his purposes."

"And now I'm supposed to tell him I want him to remove the things you make me feel? Like a tumor?"

Janip stared at the ceiling. Would she alert Sivmati if he refused to take her with him? Would she become angry if he said the wrong thing?

"Is that what you would do?" Farello said. "Visit the surgeon and tell him you want an inconvenient emotion removed?"

It would have been the logical thing to do, in Janip's opinion. But he would never have let someone implant an emotion in the first place. Farello had enhanced her drive to bond with him because she had already glued herself to her tribe—because a cold-blooded manipulator had convinced her she should do it as a service to the group that had won her loyalty.

Janip could understand the feelings that provided her with the basic satisfactions of her life. You woke up in the morning knowing you were surrounded by people you liked. You went about your days immersed in a haze of good feelings. He had even known people who transformed their personalities so they could settle into that kind of existence. Tweak a few glands. Spend a few days in a simulation that reshaped the more malleable circuits in your brain. He could do it anytime he wanted to. But he knew he would never want to.

"Suppose I do get away from here?" Janip said. "What will you do?"

"I'm not supposing. I'm assuming."

"And what would you do if you came with me? And separated yourself from everything that's important to you? I'm a trader, Fari. I'm an independent one-person business. I have friends. I have business relationships. I like most of the people I deal with. And they like me. But I don't have the kind of thing you have. I never will."

"I understand that. I want to be with you. I know I'm going to miss being here. I know I'm going to have times when I feel lonely and isolated. But I know what I want. I know I have to make a choice. I *like* wanting you. I like being attached to you."

He didn't know what he was going to do when he slipped out of bed. Would she be a handicap? Could he even be certain Elisette would let her come with them?

And what would they do afterward? Would he take her with him when he eventually left the planet?

Most sexual relationships ended before one of the parties was ready to move on. That was one of the few things he felt he had learned about that aspect of life. Some of his shorter relationships had just faded away. His eleven-year pairing with one of his mother's friends had ended with a sweet, deliberately planned interlude when they had both decided their mentor-student relationship had given him everything that particular mentor had to offer. But two of the others had plunged him into a bleak discontent that felt like it was never going to end. And he was certain he had inflicted similar feelings on the three women he had abandoned.

He rested his hand on Farello's shoulder. "I'm awake, Fari. I'm getting dressed."

She sat up fully alert. "I've prepared some clothes."

"Five minutes."

The security system responded faster this time. The first cat flowed out of the darkness seconds after they rolled into the shrubbery under the window. Janip was already standing up when he saw it coming but he still had to twist out of the cat's path as it hurtled past him.

This time the cat just sagged and settled to the ground without any histrionics. Janip broke into a run and Farello settled in beside him.

"Just stay close to me," Janip said. "I'm the one with the magic defense."

"Are you going to the dock again?"

"Just stick with me."

The next two cats behaved just like the first. Their momentum carried them through the first effects of the defensive program but they stayed down once they'd collapsed.

Janip had settled into his best medium-distance pace—one kilometer every three and a half minutes. He had maintained his standard exercise regimen while he had been residing in Sivmati's domain. He could hold this pace for at least two hours and still have enough reserve for emergency sprints.

"The designers think the program will immobilize the cats for about twelve minutes," Janip said. "They only tested it on two cats."

"You should get some advantage from surprise. Sivmati hasn't told me anything about his security arrangements but I don't think he believed you could snatch another anti-cat program. And you aren't following the same route."

Janip noted her choice of words. Was the *you* just an indication of her mental state? He had known she might be Sivmati's last line of defense when he had decided to take her with him—if you could dignify his actions with a word like decided. He had checked her clothes for items that could be used as weapons. He had watched her while she dressed. She had asked him where they were going, but he would have done the same thing if he had been the tag-along partner.

Janip veered away from the river two steps after he reached the end of the walk and started running through a random sample of undomesticated Conalian shrubbery. The sun was still sitting below the horizon but the sky had acquired a glow.

"Stay as close as you can," he said. "Don't let the obstacles separate us. I can't help you if the cats get you isolated. I've only got one defense."

Elisette had established a voice-only communications link. "I've got some hawks scouting ahead. They should pick you up in about fifteen minutes."

"I'm not alone," Janip said.

"You're the person I need, Janip. I won't argue with you. But I know what my priorities are."

Janip had swung left and started running up the little valley that would take him through the ridges. The central stream bisected the valley about three hundred meters to his right, behind the wall of plant life that flourished on its banks. Flying creatures fluttered into the air as he ran past bushes and high-stepped over vines. They were running through a maze composed of sprawling bushes and the green columns that supported the plants that had stretched upward as they competed for the light.

He glanced back and realized Farello had let the gap widen by a step. He snapped a wave at her and she nodded and pushed up behind him.

The flying creatures looked like they were concentrated over a patch of bushes when he first spotted them—until he looked right and left and realized he couldn't see the ends of the flock. There were hundreds of them, in all sizes, from finger-

length to two-meter wingspans—a noisy, rainbow colored commotion that was so dense it looked like a shimmering cloud.

They stopped a few steps from the melee and Janip realized some of the flyers were exiting the scene with yellow shapes clutched in their claws or impaled on their stingers.

"It's a feeding frenzy," Farello said. "We see them all the time. The yellow things are making their way to the stream to mate. We'll have to go around them. Away from the stream."

Janip frowned. "Why can't we just bat our way through them? The whole thing's only a few steps wide."

"You can't take the risk. You could have thirty different species there. We don't have the slightest idea how we'll react to a bite or sting from some of them."

Janip activated his link to Elisette and started running along the edge of the tumult, away from the stream, and up the side of the little valley. "We're making a slight detour, Elisette. We've run into an obstacle—a big mass of flyers feeding off some yellow things that are crawling toward the stream."

"And you can't just push your way through them?"

Janip switched on his visual routine and let her see the problem. "Fari claims it's too dangerous. Too many possibilities for unknown reactions if we get nicked."

"In the clothes you're wearing? Lower your head and bull your way through. The cats will be in more danger than you."

Janip peered down the cloud of banqueting flyers. He still couldn't see any sign this mass of crawling yellow nourishment had an end. How long could it be?

"Lower your head, Fari. Cover your face with your gloves. We're going through."

He picked out a course that would avoid the larger obstacles and plunged forward with his eyes closed and his gloves pressed against his face. Angry wings beat on his clothes. Something huge attached itself to his gloves. His feet encountered an unexpectedly slippery surface and he caught himself with an awkward crouch, without moving his hands.

"Slow down, Fari. Cross it like it's ice. It's only about four steps wide."

He was yelling through a din of whirrs and buzzes. He thought he heard her say something but he couldn't make out the words.

The big thing whirled off his gloves. He counted off three extra steps and peered between his fingers. His clothes were speckled with bits of organic debris. Yellow crawlers clung to his pant legs. He brushed at them angrily and turned around.

Fari had dropped to her knees near the edge of the swarm, surrounded by the flyers attacking the yellow crawlers scattered over her clothes. She had her gloves jammed against her face and she seemed to be struggling to get up.

Janip ran toward her. He reached into the din with one arm covering his face and pulled her toward him by her collar.

"Come on, Fari. Just another step."

She lifted her right knee and he yanked her out of the danger zone and let her stumble past him as if he was executing an unarmed combat maneuver. She started beating off the crawlers with one hand and he hurried toward her and joined the fray.

Janip had turned off his visual feed when he had started his charge. "We're through," he told Elisette. "We're getting brushed off."

"Keep moving. Do you really think those bugs can do anything to you we can't repair? You're dealing with a conflicted personality. She can't stop following you and she's grabbing every excuse to slow you down. Unless she's deliberately trying to hold you up. You can't rule out the possibility she's helping Sivmati, Janip."

Farello had pulled her gloves off her eyes. She worked her hands like she was trying to scrub them sterile, and he studied her face as he brushed off her back.

Had she really been afraid of a few shallow bites? Elisette was right. What could any creature do that couldn't be repaired?

But was it really that simple? Everything could be cured. Your whole body could be replaced if necessary. But what if the reaction affected your brain? Or your personality?

Could Fari be confident Elisette would give her any medical procedures she needed? Could she be certain Sivmati would help her if she returned to the community after she had tried to abandon it?

Farello was betraying a tribe in which a majority of the people shared her drive for community and affiliation. Would they welcome her back if they captured her? Sivmati would slither away from any implication he might be responsible. He could claim he had overestimated her loyalty to the community. And underestimated the attractions of an atomized individual who spent his life buying and selling. . . .

"Just start moving," Elisette said. "She'll follow you."

Janip gave Farello's back one last sweep. He stepped away from her and pitched forward with his eyes fixed on the terrain directly in front of him.

"Let's go, Fari. You've only got two choices. Run hard or turn back."

Elisette sighted them with her hawks' eyes a minute later than she'd hoped. One of the birds flew down the valley in search of their pursuers. The other one followed a random path through the big stems as it marked their location for Elisette.

Farello had fallen in behind him, just as Elisette had predicted, but they had slipped into a routine. Farello would let the gap widen by a step and he would look back and wave her closer.

"The skimmer has started up the stream," Elisette reported. "They tried to stop it but it caught them by surprise. I'm hoping they still don't know we're coming down the valley. They may think they just have to stay between you and the skimmer."

"Have you seen any of their birds?"

"My little pet is keeping his eyes peeled."

Janip could pick up glimpses of the hawk as it tracked their position. It was a medium-sized predator that behaved like it had been engineered for speed and the ability to maneuver through heavy vegetation. Elisette had opted for a glossy, solid black color scheme that contrasted with the gaudier costumes favored by the local fauna.

Janip glanced back and urged Farello forward with a snap of his head.

"I could chart a graph of the conflict you're talking about," Janip said. "She falls back, I wave her closer, she stops about two steps behind, she starts to fall back. . . ."

"It's what happens when you let somebody like Sivmati wiggle into your social structure. He would have used her like that even if he'd known it would tear her apart."

Low morning light flooded an open area directly in front of them. Janip angled to the left, to curve around a patch of high, thick bushes,

"You've got three cats about four minutes behind you," Elisette said. "They're coming up on your right. It looks like they're still trying to stay between you and the skimmer."

"Are they moving fast enough to cut us off? To come between you and us?"

"It's a possibility. But we've got enough firepower to break you free if it comes to that. Your real problem is the people running behind the cats. There're about ten of them and they're armed, too. Stay ahead of them. That's your main consideration."

The cats had charged through the feeding frenzy without breaking stride. They shifted left and settled into an intersection course that had clearly been plotted by a controller who had Janip and Farello located.

"I'm throwing my hawks at them," Elisette said. "They can't stop them but they can create an annoyance and slow them down."

Janip had switched to a map display that showed him the locations of the cats and the human posse. He added a feed from the hawks, just to provide him with some diversion, and selected omniscient view. If he was going to watch a bird and cat fight, he might as well let his system show him how it probably looked from the outside, instead of staring at confused closeups of fur and snarling faces.

As a delaying tactic the attack was only moderately successful. The cats reared up and slashed at the hawks with their claws the first time the hawks dove at their faces. Then the controller running the animals made them ignore the next attack and keep running. The hawks fluttered from cat to cat, pecking and clawing at their backs and shoulders, and the cats maintained their pace without breaking stride.

Janip checked the map display and realized the cats would reach him before he connected with Elisette and her partner. He made another switch to the left, up the side of the valley, and advised Elisette of the change. "I'm moving us up the slope. About fifteen meters. There's less plant life. And I think we run better on slopes than the cats do."

"Just don't forget we're on horses. Horses have their limits, too."

"Can't your hawks go for the cats' eyes?"

"We'll get you out of this, Janip. Just keep moving. Just stay ahead of the posse."

Was this a good time to smother his natural feelings under a blanket of calm? Would he be better off if he let his muscles and his brain operate like they belonged to somebody who knew his whole future was at stake?

He glanced back and realized he had let Fari fall behind again. He waved her forward and she stumbled over a bump in the ground and lost another half step.

"You don't have to save your energy, Fari. They're only about five minutes ahead."

A bird flapped its wings in front of his face. An angry white-feathered hawk shrieked at him. He batted at it reflexively and it held its place and shrieked again.

He lowered his head and drove himself forward. The bird beat its wings over his back for a moment, then the shrieking moved away. He looked back and saw Farello hitting at it with her arms.

"Keep running. Cover your face. Like we did with the insects."

Farello bent over. She lurched toward him with one hand pressed against her face and the other hand punching at the bird.

Elisette's hawk fell out of the sky. Two sets of wings thrashed around Farello's head. The hawk shot upward and Janip and Farello stared at the mangled thing flapping on the ground.

Janip strode toward Farello. He grabbed her arm and jerked her away from the dying bird. "How much longer, Elisette?"

"Two minutes. At the pace you're going now."

"You can't go any faster?"

"Horses have bones, Janip. They won't do us any good if they can't carry you out of here."

He got his first direct look at the two cats when they reared above the bushes about fifty meters ahead. They dropped out of sight and Elisette's hawk skimmed over their position.

Janip studied the terrain around him. On his left, the slope steepened, the flora thinned, and the side of the valley merged with a towering rock face. On his display, Elisette and her companion were closing in from his right front. A circle marked the area in which Sivmati's posse was working its way through the obstacles behind him.

"What do you want us to do, Elisette? Stand fast or try to go around the cats? We might get past them if you used the hawks again."

"Are they acting like they're going to attack?"

"They gave us a clear warning and held fast. It looks like they're trying to fix us here."

"Move closer. Straight ahead. Put a little extra distance between you and Sivmati's gang."

Janip slipped his hand off Farello's arm. He took a careful step forward.

The cats reared up again as he finished the third step. He added a fourth step and they reinforced the warning with a pair of sharp, raspy snarls.

He peered over the cats, toward the point where his display located Elisette and her companion. He could just make out two heads when he edged to the right and looked past a mound covered with a thick mass of vines.

He raised his arm. "I can see you, Elisette. I can see your heads over the bush."

The cats broke into an attack that carried them over the obstacles in long, arcing bounds. He had switched on his defensive program, just in case it still had some value, but the operators working the cats had obviously neutralized that option about as fast as he'd assumed they would.

They weren't going to kill him. Sivmati needed a live bargaining chip. But they could cripple a leg. Or chew it off. And leave him that way, securely hobbled, while they continued their haggling. . . .

"Follow me, Fari. Elisette's almost here."

A cat swerved toward him. It blocked his path ten steps in front of him and brought him to a halt with a warning snarl.

Janip showed the cat's operator the palms of his hands. Farello had actually backed up. The other cat had run between them and dropped into a crouch a single, easy bound from her position.

"They've got us locked in, Elisette. It's up to you."

"We're on our way. Take them out, Lersu."

Janip had never ridden a real horse but he had fought his way through his share of horse-and-swordplay simulations. In the fantasy version of mounted combat, the horses always moved at a gallop when they attacked and the designers usually reinforced the effect with yells, pounding hooves, and a touch of appropriate music. Elisette's partner advanced in complete silence at a speed that was only a few percentage points faster than the pace he had been maintaining. Janip didn't see any sign anything had changed until he realized Lersu had pulled ahead of Elisette.

Lersu was holding a swivel-mounted stunner in his right hand, with the sighting glasses lowered over his eyes. He was wearing a fuzzy yellow cap that blanketed most of his head, but you could assume he had equipped himself with a brain-machine link before he had donned his headgear.

The cat guarding Farello screamed. It leaped across the brush, teeth bared, and she turned and ran down the slope.

The cat guarding Janip charged him with the same histrionics. He stood his ground and Lersu's stunner cracked twice.

"Get up behind me," Lersu said.

"Get the other cat. It's chasing Fari back to the posse."

"Elisette told me to get you. She'll take care of the other cat."

Janip studied the stranger looking down at him. He couldn't evaluate Lersu's facial expressions but he could hear the hint of tension in his voice.

He dropped to a crouch and ran toward Farello. "You take both of us, Elisette. That was the agreement."

"The posse's too close. Get on Lersu's horse. We'll get her out later."

"Don't let him stun me. You take both of us. Or no eyes."

"We have a contract, Janip."

"And you implicitly agreed to take Fari when I told you she was with me. You aren't my only potential customer."

"Hit the other cat, Lersu. Her, too, if you have to."

Farello was still running like she was treating every bump and tangle as if it was a valid excuse to zigzag or slow down. The cat had locked onto her heels and started punctuating her steps with a snarl that should have added some heartwarming numbers to the accounts of the genetic designers who had put it together.

Lersu rode past Janip at a slow trot. His stunner cracked. The cat stiffened in mid-snarl and he fired again and brought Farello down.

"Get her on the horse, Lersu," Elisette ordered. "Will you please be kind enough to get out of that mess, Janip?"

Lersu slid out of the saddle. He crouched beside Farello and Janip stood his ground and watched.

Lersu's horse crashed to the ground. Lersu snapped his head around and Janip realized he had heard a stunner crack.

He threw himself behind a wide, spiky shrub. He hadn't seen anybody moving through the bush but he could hear more stunners on his left. Sivmati's advance forces had moved within firing range.

"Hold them off, Lersu. Get the woman behind some cover. Janip—crawl over there and start dragging her this way. Do what I tell you or believe me I'll leave you both crippled and let you spend the next century begging Sivmati for whatever medical help his little village can scrape together. You aren't the only one who knows how to drive a bargain."

Janip scurried across the ground through flights of disturbed insects. He could hear Lersu's stunner firing with a rhythmless deliberation that indicated he was only shooting at targets he could see.

The cats would have recovered by now if they had been hit with a standard back-off charge. Lersu had rammed them with a harsher setting. Farello was sprawled across the ground like he had assaulted her with the same force.

Janip noted the red delivery patch on her neck and relaxed. Elisette had come prepared. He would just have to make sure they didn't use the same drug on him.

He grabbed Farello's collar and started dragging her toward Elisette.

"I'll tell you when you're out of their range," Elisette said. "Then you can pick her up and carry her."

"How long will she be drugged?"

"Long enough to get you out of here. Concentrate on moving. I'll take care of the tactics."

"What will you do if they take Lersu?"

"What good will it do them?"

"I had a feeling you'd say that."

"He's in his element. Sivmati's zealots would have to get very lucky."

Elisette started calling targets. Most of them were on the right—in the general direction of the stream. Sivmati's best move would be an advance that pushed a group past Lersu on that side. They would close in on Elisette and come between her and the skimmer on the stream as they advanced.

In the games he had played, Janip had been encumbered by awkwardly shaped weapons when he crawled. The mass he was pulling now was as uncomplicated as a sack but it weighed a lot more than a low-impact stunner. And aroused emotions that were significantly more volatile than the feelings he would confer on a bag of trade goods.

"Get up, Janip. Drag her. Don't try to carry her."

Janip aimed himself at Elisette as soon as he stood up and hurried toward her without checking out the situation.

"Can you ride, Janip?"

"A horse? No. I've never done it."

"Here's my standard instructions."

Janip approved the reception and a visual appeared on his display. Elisette had already slid out of the saddle and posted herself beside her horse's head.

"Drape her in front of the saddle. This is no time to be romantic. Head for the stream. On this route. The skimmer will pick you up. We'll hold them off and retreat."

A route had joined the mounting visual on Janip's display. They hung Farello across the horse as if she really was a bundle of inanimate supplies and Janip eased himself into the saddle.

The horse started moving. Elisette broke into a run and headed for a position that would add more firepower to Lersu's left flank.

"I've still got your mount under control," Elisette said. "The route map is a contingency item. Just stay on board. You pay for any repairs on your passenger."

The horse was carrying an extra stunner but Janip left the weapon in its holster and concentrated on urgent matters like the fine art of remaining mounted while you tried to present your pursuers with the smallest target the human body could achieve.

The arithmetic didn't look encouraging. Sivmati and his posse had two adversaries outnumbered five to one—or better.

On the other hand, one of the people opposing Sivmati was a woman with a notably resolute personality. You couldn't assess the odds with a simple unadjusted head count. . . .

He was about two hundred meters from the stream when Elisette let him know things might not be going quite as well as she'd hoped. The cover had thickened as he approached the stream and the horse was pushing through a mass of high, thick stems. Vines and low lying plants brushed against its lower legs.

"Be prepared to use the stunner," Elisette said. "I'm working my way toward you. But I may not get there before they do."

Janip reached for the holster. A stunner cracked somewhere on his right. He had already lowered the sighting glasses and slipped a brain-machine link under his hat.

"Can you make this animal go faster, Elisette? I can't see the stream yet but the display says we're almost there."

Motion jerked his head around. A figure had stepped from behind a stem.

His stunner cracked while the other weapon was still being raised to firing position. The would-be ambusher sagged to the ground and he peered into the shade.

"They're here, Elisette. I just survived an ambush. Sivmati's foot soldier stepped into the open without raising his stunner first."

"Dismount. On your left. You can't see us but we're on your right."

A stunner cracked. Janip put the dismounting instructions on his display and climbed out of the saddle. Elisette had just advised him she felt he was more valuable than her horse. He shouldn't assume she would flatter Farello with the same honor.

He fell into a fast walk beside the horse's shoulders. He still couldn't see the stream itself but he could make out the sheet of light that marked the break in the forest.

The horse sagged toward him without any warning. He grabbed Farello's jacket with his free hand and lurched away from the wall of animal flesh that was collapsing on top of him.

He ended up huddled behind a bush with Farello sprawled behind the horse with her face pressed into a mass of vines. "Keep moving," Elisette said. "We're covering you."

He looked around. The only moving creatures he could see had wings and extra legs.

"You're beginning to try my patience, Janip."

A route appeared on his display. Two stunners fired simultaneously. He clutched the handiest spot on Farelo's clothes and started crawling the last twenty meters between him and the stream. He knew the ground cover was scratching the exposed parts of Farelo's face but he didn't have time to turn her on her back.

He could be sitting in the skimmer right now if he had left Farelo behind. Was he just being stubborn? Was he sticking to a course of action merely because he had started it and he couldn't bring himself to change?

His mother had insisted people need to form long-term bonds. She felt she would still be living with his father if he had survived the calamity David Jammet had brought to their world. *You grow together*, she said. *You build connections that are so strong nobody else can give you the same thing.*

He could see that. But did he want to create bonds like that with somebody he had met during a bad time? Somebody who had been deliberately modified to attach herself to him?

"I'm coming up behind you," Elisette said. "Get her on her back. You on one side, me on the other."

He looked back and saw Elisette scrambling toward him on all fours. She pulled up beside him while he turned Farelo over and tapped her finger at the precise spot on Farelo's shoulder she wanted him to grab.

"Have you noticed you haven't heard any stunners for the last couple of minutes, Janip? Sivmati's organizing a mass rush—the last resort of the unimaginative tactician."

The slope of the ground steepened. They had entered the final tangle that bordered the stream. Crawlies and flyers erupted around them with every shift of their bodies.

"Here they come," Lersu said.

Voices screamed and bellowed on their right and rear. Sivmati's warriors had been maintaining vocal discipline and communicating by their implants, but now they succumbed to the ancient human impulse to howl like an animal when rushing toward an armed enemy.

Elisette sprawled behind the nearest patch of cover. "Keep going. Get up and crouch. They're too busy running to shoot."

Janip pushed himself up. A dot on his display located the skimmer. It had moved upstream, to stay out of range, and now it had turned and started racing back.

Lersu and Elisette were firing steadily—one arhythmic crack after another. Farelo's foot caught in a thick vine and he jerked it free without worrying about damage or pain.

He splashed into the water seconds before the skimmer pulled up in front of him. Farelo's inert mass rolled over the side into the cargo space in back. He threw himself into the space between the seats and huddled against the damp on the deck.

The skimmer rocked. "Let's go," Elisette said.

The skimmer lurched forward. Janip raised his eyes above the seats and saw half a dozen people standing in the water, near the spot that marked Lersu's position on his display. A woman raised a stunner and he dropped to the deck and stayed there until Elisette advised him they were safe.

Elisette started bargaining for Lersu's release while they were still racing up the river toward Belita Falls. Sivmati knew he couldn't use Lersu the way he had hoped to use Janip, but he wasn't averse to a bit of ransom.

"I should bill you for everything I'm losing on this," Elisette said. "If you hadn't insisted on dragging Sivmati's irresistible devotee with you, we would have packed you on a horse and ridden away before they got within ten minutes of us."

Janip busied himself with Farelo's recovery and held his tongue. Margelina had

already activated her bank's formidable public relations system. Three news feeds had transmitted urgent requests for statements.

"Keep it to a minimum." Margelina said. "You've got a very saleable story."

Janip turned toward Elisette and transmitted his view of her to the news feeds. It was the first time he had ever talked to a planetary audience but he had been watching other people do it for seven standard decades.

"I just want to emphasize that we all owe my liberator a great debt," Janip said. "Elisette has defended the rights of every trader on Conalia. She has defeated the kind of piratical behavior that destroys free trade and the economies that depend on it. Everyone on the planet should be grateful."

Elisette couldn't stand up at the speed the skimmer was making, but she managed a small wave and a half nod that communicated the right mixture of graciousness and humility. She had watched a few news feeds, too.

A cantankerous observer might have noted that Elisette had provoked the whole situation by creating a dam that would give her a monopoly on a major source of power. For now, she was the champion of free markets and free trade.

She might have carried out her threat and billed him for her losses if she had been driven by a pure, unadulterated delight in amassing wealth. Her grab for power had made it clear she had other, more complex ambitions. If he had judged her right—and he had overwhelming evidence in support of his conclusions—she would think of Lersu's ransom as the price she paid for an increase in her political prestige.

The eye transplant took a full tenday. Nerves had to hook up. Biochemical processes had to be monitored and tweaked. Janip gave her an end product that incorporated every bit of training and experience he had accumulated—and justified every digit he added to her bill. Elisette was particularly pleased with the sharpness of the images she could transmit with the communications upgrade packaged with the eyes.

Janip sold nine sets of eyes altogether before the local specialists reverse-engineered his import and trained themselves to a competitive level. By that time, he owned a comfortable apartment in Kaltuji City and Margelina had guided him toward his first real estate investments.

Farello loved the life of a thriving commercial city. She even started helping him look for new opportunities. There was nothing artificial about the affinities they shared. Sivmati had built her emotional modification around a true attraction. But she also spent two or three hours a day in contact with the Cultivator compound. She could chat about every gossipy development the place could produce. One of her friends asked her to continue some of her work with the unterrestrialized ecosystem and she fitted in several hours, without telling Janip, when he was working on one of his own projects. He wouldn't have known she had done it if he hadn't finished early and tried to contact her.

"You're trying to live in two worlds," Janip said.

"Do you want me to change myself? And go back to the compound?"

He didn't, of course. But how would he feel in twenty standard years? Or the next time a starship orbited the planet and he started thinking about the developments he could take to another world? Conalia was a newer world than Arlane but he was already assembling a library of promising trade items. The tweaks his competitors had added to the eyes could be a major addition to his wares all by themselves.

Farello wasn't the only person who had to live with her conflicts. Janip was coming to a sad conclusion. The world could only give you half of the old fairy tale formula. It could only offer you the possibility you might *live* forever after. The *happily* part seemed to be more elusive. ○

NEXT ISSUE

AUGUST ISSUE

Three big novelettes form the centerpiece of our August issue, perfect for the beach or poolside, (and the cabana, if you don't care for the sun). The first features the return of recent *Asimov's* discovery **Gregory Norman Bossert** and his "Slow Boat"—the boat here is on its leisurely way to Mars containing a most unwilling passenger, a young woman threatened with interplanetary exile for her hackerly ways. Can she, with little but her own wits, turn the tides on her mysterious captors? Next, in "Crimes, Follies, Misfortunes, and Love," **Ian Creasey** takes us to the not-so-distant future, where our poor post-semi-apocalypse descendants must sift through old blog entries and internet detritus to uncover their cultural heritage. We can only hope they won't find 4Chan somewhere down there. . . . You won't find anything harmful or offensive in **Alexander Jablov**'s latest—quite the opposite, in fact, as everything in this particular world carries a "Warning Label," which can nevertheless cause some significant problems for progressive politicians.

ALSO IN AUGUST

Acclaimed historical novelist **Alan Wall** makes a surprising and welcome *Asimov's* debut with "Superluminosity," a literate and amusing tale of a man thrown far back in time through a beautifully rendered past London; **Carol Emshwiller**, gives us a disturbing look at a moral conflict between the truly alien and a crew of unsuspecting humans in "The Lovely Ugly"; **Pamela Rentz**, making her *Asimov's* debut, with a wistful alternate history in which Native Americans hold a much different place in the American narrative, one in which they are able to participate in "The Battle of Little Big Science"; **Julia Sidorova**, making her *Asimov's* debut, "The Witch, the Tinman, the Flies," describes the unfortunate travails a group of geneticists must persevere while working behind the iron curtain of Communist Russia; and **Nick Wolven** follows the tragic tale of a prisoner whose valuable talents are exploited by his captors in "On the Horizon."

OUR EXCITING FEATURES

Robert Silverberg's Reflections explores some recent SF scholarship in "Brave New Words"; James Patrick Kelly, not to be outdone, explores "Brave New Worlds" in On the Net; **Peter Heck** contributes "On Books"; plus an array of poetry you're sure to enjoy. Look for our August-issue on sale at newsstands on June 22, 2010. Or you can subscribe to *Asimov's*—in classy and elegant paper format or those new-fangled downloadable varieties, by visiting us online at www.asimovs.com. We're also available on *Amazon.com's* Kindle!

COMING SOON

new stories by **Kristine Kathryn Rusch**, **Mike Resnick**, **Tom Purdom**, **Mary Robinette Kowal**, **Sara Genge**, **Robert Reed**, **Will McIntosh**, **Eugene Mirabelli**, **Geoffrey A. Landis**, and many others!

EDDIE'S ANTS

D.T. Mitenko

D.T. Mitenko is a writer and traveler who has made his home in the Maldives, Nepal, and Mongolia. Most recently, he's settled down in Vancouver to complete a Masters in Global Health, a perfect addition to his BSc in Computer Science. David has sold fiction to *Afterburn SF*, *OnSpec*, and *Bewildering Stories*. His first tale for *Asimov's* is the quirky story of an alien hive-mind and the man who is trying to kill it.

Edward laughs when he finds out what a gun does. He does this as I press the weapon against his forehead. A Colt .38. It can put a hole through six inches of concrete and he finds this funny.

"A tiny blob of metal? I don't care how fast you can accelerate it, that's horribly ineffective as a weapon," he says in his creaky voice.

I tell him that it seems to work all right on humans and blow his head off. The crack of the shot is so much louder than expected and I bolt for the exit in a panic. I poke my head out the door and the Stritts, lord and lady of the strata council, poke their heads out at the same time. We look at each other and then duck back inside our respective apartments.

A short time later the police arrive. Then the Stritts. By the time Aleksa comes home it's a regular social scene. "My couch! What's happened to the couch!?" She tears her tortured gaze from the wounded davenport and finds me. "You!" she fumes. "What are you doing here?"

"Well, technically, nothing too illegal," the poor cop tells her. He scratches his head. "Are you *sure* you shot him?"

"Allow me to explain, gentlemen," a squeaky Oxford accent interjects. Edward sits up and takes his hand off the puckered suture still sealing itself across his face. I would have shot him again if they hadn't already taken the gun from me. "Matthias here—"

"Just Matt, thank you."

"Matt here made a common mistake in assuming my nervous system was as primit . . . ahem, as centralized as yours. Really, putting a bullet through my face was as life-threatening as say, cutting off a finger."

The cop takes his eyes away from Edward's sucking wound to check his pad. "We could go with reckless endangerment, I guess."

"Oh please," Edward holds his hands up placatingly. There's a collective gasp as his wound contorts around the semblance of a smile. "Matt only pulled the trigger at my insistence. It was really just a big misunderstanding. There was no harm done—"

"Except to my couch!"

"Except to the couch, which I'm sure Matt will take care of."

Curse Edward. Curse that affected accent and thousands of years of intellect. I don't care that he's just saved me from jail and certain ruin. I can admit now that it was wrong to shoot him. Explosives would have been more effective—but somehow not as satisfying as a good baseball bat.

I still can't believe Aleksa dumped me for that alien freak. What does she see in him? Aside from the staggering intelligence, I mean. Compared to him I'm a brute, a savage. Sure I have a Ph.D in Theoretical Minkowski Spacetime (hyperspace to the layman), but compared to Edward I'm about as clever as a Neanderthal whacking heads with a thigh bone. Which brings me back to the bat.

"Matt." Edward steps out of the shadows of the stairwell leading up to my condo. Yes, I live in the same apartment complex as my ex-fiancée. No, it's not stalking. It just happens to be close to the university, that's all.

Edward has two beers and holds one out as an offering. "I hope you're not too upset about what happened back there."

"Upset? Me? I tried to kill you, remember?"

"Oh yes, I know." His leathery skin stretches into a rictus grin.

"Thanks," I crack the beer and take a sip. "I think you need to practice some of your facial expressions. Your smile, for instance, you're overdoing it. It's a little creepy."

The white blocks of teeth disappear, but even without the walking dead grin Edward is still only a human facsimile. There's enough *falsehood* about him that can't cheat the senses. Mostly it's the eyes, the multi-faceted rows that glitter in the garden path lights. "I have a proposition for you, Matt. Your attempt on my life this evening, I found it . . . invigorating."

"Uh-huh."

"I was thinking . . . so long as Aleksa doesn't find out and no one gets hurt—aside from me, I suppose—perhaps you could continue with your efforts."

I respond by choking on my beer.

"Back on my planet, colony raids are a very common occurrence. And while the reason I emigrated was because I never personally had a taste for killing—I always suspected there was something more—now that I'm here I find that life without that constant, ambient threat of death to be a little less . . . vivid."

"Can I have the keys to your apartment?"

"I'm homesick, Matt, not suicidal."

"Of course," I reply, although I'm not convinced there's a nuanced difference between suicide and asking someone to kill you. "G'night then."

"Good night, Matt." I feel those glittering eyes follow me all the way up the stairs.

I have lunch the next day with Dimitri at the Faculty Club. "You know how sometimes a girl breaks up with a guy," he opines around his steak, "and then it turns out she's gay and the guy thinks it's all his fault? Like he turned her off of men or something. Man, how does that make *you* feel? You turned Aleksa off the entire human race."

Dimitri's an astrophysicist. The man has spent his life trying to grasp interstellar distances and the lifetime of stars; minor details like human suffering aren't a part of his realm. "You know what else has been bugging me?" he says. "How do they do it? Does he have some sort of oozing tentacle or something?"

"There's no tentacles," I tell him miserably. "It's a Spec Colony."

"A what?"

"He's *ants*. He's just a big pile of incredibly evolved ants, some wonderful freak of nature from . . . somewhere over there." I wave my hand at the sky.

"Ants?" Dimitri looks like he wants a gulp of his beer just so he can spit it out in surprise.

"It's a rather crude analogy," an Oxford accent declares from behind me.

"Oh! Ah . . . Edward . . . we were just talking about . . ." Dimitri drums his fingers on the mahogany table. ". . . uh, my recent trip to South America?" Remember, the man is a physicist, not a dissembler.

"While I appreciate the comparison, Specs are many millions of years more evolved than your local equivalent." Edward conversationally waves a glass of Merlot in the air. "Ants have a long, long way to go before they become as specialized as one of our colonies. It would be like comparing a human to . . ."

"A monkey?" Dimitri offers helpfully.

"Perhaps a tapeworm."

I thank him and file a mental note to call him Ants from now on.

"Why did you insist on the Faculty Club anyway?" Dimitri asks after Edward moves away. "Didn't you know he was going to be here?"

"Yeah, I knew," I say as I look around. I'm here because there she is, gliding out of the ladies' room breathtaking in a blue, backless dress. Aleksa sees Edward and gives him a smile, that special smile that makes something squeeze painfully in my chest.

On the way home I let myself into their condo. I still have the keys to what used to be my place.

A few days later a handwritten note is posted on my door:

Dear Matthias,

While I appreciate your most recent attempt on my life I am concerned that Aleksa could have accidentally come to harm. Please try to be more careful in the future.

Your "live" laptop trap was otherwise ingenious (I'm glad that I backed up my research at the office). Unfortunately for you, Specs have been using electricity as a weapon for some time. It is common practice for a colony to carry an embedded "ground" wire to direct current around any vital organs.

Please don't be discouraged. Perhaps if you explore more inventive avenues you may succeed in bringing me personal harm.

Regards,
Edward

"A bat would've been better, obviously," I tell Dimitri when I see him again at the Faculty Club.

My colleague nods sagely and drinks heavily. "So . . . *why* did he ask you to kill him?"

"Meh . . . something about his home planet, I'm not really sure."

"Aren't you at all curious?"

"Look, the guy . . . the thing wants to be killed. And by a happy coincidence I happen to want to kill him. We're all in agreement here, so why ask why?"

"Matthias," Dimitri laces his fingers together and leans against the table. "I'm a little worried about this. Ever since Aleksa got ants in her pants you've been acting pretty manic. I think this whole episode is bringing out your xenophobia."

"Xenophobia? Me? What are you talking about? I love xenos! I'm a *xenophile*, a *xenophyte*! It's just when I think about that one bloody ant infestation in Aleksa's house . . . I admit, I get a little xenocidal." Dimitri isn't looking at me anymore—he's staring at the space above my head. "He's right behind me, isn't he?"

"Gentlemen," Edward announces himself. "Well, sir, I take it that you haven't given up on our little arrangement?"

"You'll know when it's over, Eddie Ant."

"Now please—"

"You're so bloody cocky about being Specs and super-evolved and all that jazz but you know what? We've got one up on you. Here you are standing in a human body (more or less) that took you twice as many steps to get to than it took us to become human."

Dimitri looks concerned. Edward looks like a confused corpse. "Please explain."

"Well the way I see it, on your planet, just like here on Earth, single-celled organisms evolved into multicellular organisms. That's the first step. But then your ants—"

"Specs, please, no need to be coarse."

"Specs, whatever. So then your Specs went on for a few more bazillion years and eventually became specialized and co-operating units within an even greater super-organism. Hey great, cool. But meanwhile us humans, see, we just needed the first step: single-cell to multicell and here we are, the two of us. Practically the same. We win."

"I see," Edward takes a contemplative sip of his wine. "There are some subtle differences between our species, of course. As a colony of self-replacing parts I will never die of old age. In fact, I'm thousands of years old. As well," Edward reaches across the table and picks up Dimitri's steak knife, "if you kill one or even dozens of my constituent organisms the colony as a whole still survives. I'm sure you've noticed this, Matthias. Whereas all I have to do is—*fwip*—slice this across your throat and you, the lone multicellular organism, are over." Edward drops the knife back on the table and continues pleasantly, "and forgive me for disagreeing with you, but I feel your evolution has accomplished the same two steps we have. Only on a different scale."

"Explain."

"Well you humans are certainly multicellular organisms, the constituents, same as a Spec. It's your society, your culture, which is the super-organism—"

"We're not ants, Eddie," I cut in. "Not by a long shot. Do we look like mindless drones from the mother colony? I don't think so."

Edward spreads his hands ingenuously. "Well, you call yourselves social animals and you certainly exhibit the behavior of suborganisms. From my viewpoint, from the perspective of a creature that really is an individual, I see behavior among your own kind that is so innate, hardwired perhaps, you aren't even aware of it."

"Take this university," Edward gestures around the room. "You cooperate with people who aren't even related to you—that's fascinating to me! You conform to this societal mind you call 'culture.' And *language*—don't even get me started about language! Your babies are born craving to learn how to speak. I mean, what do you think the need for such sophisticated communication is for?"

"And finally, take crime," Edward picks up the knife again and holds it to his glittering eyes. "All of you are so concerned with misdeeds and felonies when in all honesty I am perplexed that the crime rate isn't ten times, a thousand times, what it is. In a world of individuals, real individuals whose concern is only for themselves—and perhaps some genetic relations—things like theft and murder wouldn't be called deviant behavior. They'd be called normal."

The strange thing about Spec Colonies—well, one of the strange things about them—is that they don't bleed. Edward is dry. Instead of a liquid circulatory system, his body is riddled with tunnels for specialized "transport" specs. When I knock his head off with the Slugger all I see is a chalky goo and a sudden surge of angry dots.

Eddie has been supportive until this moment—even as I was dousing him with gasoline. "Now you're thinking like one of us!" he'd enthused. "Fire! One of the oldest weapons in the arsenal!"

With a match and a small explosive *poomf* his clothes and outer skin begin to burn.

Eddie calmly begins to pat himself down as if he's accidentally singed himself instead of turning into a fiery torch in the parking lot. That's when I take out the bat and really go to work. I don't know what he thinks of this because he can't tell me without a head. The end of his neck is an animated, swarming hive. I focus on the white "neuron" specs and do my best to burn and stomp them out. At least until some of them get past my shoes and I run, hopping and yelping, away from the scene of the crime.

Spec bites, it turns out, are incredibly painful.

I limp into the Faculty Club the following afternoon, slightly worried that the ointment greasing my legs might soak through my trousers. I feel good. I feel confident again. Here are all my peers, my friends who look up to me and respect me. There's Aleksa, smiling, and there, turning around to greet me, is Edward.

"Wha . . . how . . . ?" I stagger against the table. There are no burn marks, no scars. In fact it looks as if Edward has lost some weight.

"Your thinking is still very human, Matthias," he says, almost apologetically. "You assumed I had a single centralized nervous system, without backup. Only one brain with nothing to replace it if it's damaged?" Edward does an excellent imitation of a shudder. "In truth, I find the very idea horrifying—no offense to you or your kind."

"None taken," Aleksa looks suspiciously between the two of us. "What's going on here?"

"Nothing, darling, absolutely nothing," Edward stands and guides me over to Dimitri's table. He tactfully says nothing about my painful limp. "The sad truth is," he says once we are out of earshot, "my kind have been trying to kill each other in these ways for millions of years. Please don't give up though, I do enjoy your efforts. Hello, Dimitri."

"You know," Dimitri muses as we watch Edward glide back to Aleksa's table, "I still don't get how that moving, thinking creature is supposed to be a colony of ants."

"The specialization is all in the abdomen," I say, despondently scratching my burning legs. "Some specs secrete a carbon composite that can be used to make support structures—bones, basically. Others secrete lubricants, oils, pheromones or even weirder things like that plastic layer he calls a skin. Look at those eyes, you know what you're looking at? Row upon row of specialized abdomens, optical specs. They're grouped together and transmitting signals along 'nerve' ants into the brain cluster, which is just a webwork of synaptically connected neuron specs. Alone, isolated, a spec is no better than an ant—probably worse because it's so specialized—but working within the whole it makes up the incredible, unkillable Eddie Ant."

"Ungillable? Does that mean you're giving up?" Dimitri asks with a hint of hope.

"I don't know. It's like he said, they've been doing it for millions of years. While we've been learning to work together and do stupid things like share and sacrifice, all his species has been doing is trying to kill each other." I grope for my beer. "I can't compete with that."

"Why don't you pay a visit to the Waveform Lab?" Dimitri asks. "We haven't seen you there in months. We're testing out some new warping patterns, it's very exciting . . . we miss you, Matthias."

"I can't compete with that," I exclaim suddenly, slamming my hand on the table. "But I can find someone who can!"

Dimitri sighs and goes back to his lunch.

Leslie is tall and waifish. She has a funny way of walking, a stagger that propels her across the courtyard. Mix that in with her thin, straw-colored hair and she's like some gangly, plastic scarecrow. "It's so kind of you to take me in, professor," she gushes.

"Think nothing of it," I reply graciously. She lurches up the stairs as if being upright, bipedal, is something entirely new to her. This may be the case.

"I wasn't expecting much when I posted on Craigslist Eastern Milky Way. I mean, finding an immigrant sponsor is pretty tough no matter where you're trying to go—but this is everything I could have hoped for!" She smiles and it's that same, unnerving rictus grin. Whose photographs are they studying on Planet Spec? How can they think a grimace like that is a human's expression? "You see, kindness is a very uncommon gesture among my people . . . gosh, I'm sorry but this place stinks of another colony."

"That would be Edward," I say happily. "He lives just over there."

"Another Spec Colony? Here?"

"Yes. Ha! Ha! Imagine that. I guess you don't really like each other, do you? I have the keys to his place, you know."

"Professor," Leslie looks pained. "I'm sorry but we have . . . instincts . . . that aren't easily ignored. I don't know if I'd be able to live with another colony so nearby. He's much too close. I would have to . . . well, if I were to take this place Edward and I would have to fight over the territory. Possibly to the death."

"We all have our urges," I reassure her. "Some people eat a lot of chocolate, you have to kill your kindred. Why don't we go inside and talk this over?"

Leslie unpacks her meager possessions in the guest room and we sit down for coffee. She's pensive as she sips from her cup and I can't help wondering where the hell the coffee's going. "You don't seem to have a problem with my feelings toward Edward. . . . I thought humans were opposed to killing."

"I'm very cosmopolitan," I reply. I see the quizzical look in that multifaceted gaze and, with a sigh, put my mug down. "I guess it's a little more complicated than that. . . ." and I find myself explaining the whole thing: the new blob on the block, how he gets all the attention in the lab, and how Aleksa went after him.

"I think I see," Leslie jerks her head in an attempt at a nod. It would take time, I guess, before her human mimicry is as smooth as Edward's. "On our planet we have something similar. Sometimes, when a colony has been displaced from its territory it will stay and fight even when there are perfectly good resources elsewhere. I think, but I'm still a neophyte with words so I may be wrong, this can be translated into a pride struggle. Yes?"

"No, not pride," I object. "It's love. Heartbreak, to be specific."

"Of course. Forgive me. I still have much to learn when it comes to these intersocial concepts. You are in love with Edward, then?"

"With Aleksa."

"Oh!" Leslie smiles uncertainly. "You hadn't really mentioned her. It sounded as if . . . well, Edward came into your faculty and overshadowed your own prestige. Then of course Aleksa left you for him, which was another blow to your pride. Forgive me for not seeing this initially, hurt pride and heartbreak seem to be very similar concepts." After a reflective pause she asks, "So Edward is now studying in your faculty?"

"More or less. Technically he's still a Ph.D student but he's come up with some new equations for hyperdynamic flux that are, well, brilliant."

"Studying. And learning. How human! I can't wait to absorb his experiences." Leslie claps her hands. "You see, we don't really have *learning*—not in the institutionalized sense. For us wisdom and knowledge don't come from co-operation and sharing, but from raiding other colonies neural stores. You have a saying about learning, 'if I have seen a little further it is by standing on the shoulders of giants' and that makes no sense to me. Specs don't learn by standing on shoulders, but by killing the owner of those shoulders and taking their minds."

"Honestly, a part of me was hoping to get away from all the killing." She walks over to the window. "Are those the university buildings? Look at that!" She pauses and shakes her head. "You know, my kind are tougher, smarter, and more long-lived than yours but if you were to look outside my home all you'd see are distant mud hovels,

not skyscrapers, crowds, and traffic. We don't have society. The individual is the greatest unit. We don't have . . . this."

"Do you get along at all?"

"Over the millennia we've achieved a dynamic equilibrium—more or less a constant state of war. Even mother-daughter colonies, after enough generations, will come to see the other as an enemy. For some of us, we get—lonely. That's why we emigrate."

" . . . you came here looking for company?"

"To live only to raid and decimate nearby family isn't a life at all." Leslie gestures out the window. "This is something greater. Here I can relax, contribute to society. And live a meaningful, peaceful life."

"Here? Really?"

"Well," she shrugs and smiles, "right after I kill Edward."

Leslie goes into the guest room and shuts the door. Several minutes pass while I stand at the window as if it's the first time I'd really seen the university. I'm not sure what's going to happen. She's going to kill Edward, that much I understand. Hopefully with minimal property damage, but then again perhaps she could be, even at this moment, transforming into a giant, toothy beast in my guest room.

I call Dimitri. "Do you think I'm proud?"

After a long, thoughtful pause he answers, "In a way, I think you identify a lot with your work and your achievements." When Doctor Dimitri Astrophysics starts answering personal questions like a politician you know you're in trouble.

"Do you think that this whole Edward thing has more to do with wounded pride and less to do with a deranged attempt to get back with Aleks—OH HOLY FECK!" At that moment I happen to look down and see the thick, black ribbon of specs flowing out from under the guest room door. I follow the ribbon out the front door where it winds down a stairwell post, crosses the courtyard and courses into Edward and Aleksa's condo.

So this is how you kill a spec colony. I stand transfixed in the entranceway, ignoring the phone and Dimitri's frantic shouts and watch the flow and counter-flow of specs past my feet. Edward the lonely, misfit Spec Colony who believes he can belong to a greater whole is facing his last moments. He's traveled thousands of light years to come here, to Earth, only to be done in by a lonely, misfit human who'd rather kill him out of pride.

Out of pride.

On the whole Aleksa is materialistic, manipulative, and self-centered. We used to fight a lot.

I step over the living river of specs and run into the guest room. "Stop! Yow!" Leslie is sprawled out on the floor; at least most of her. She's deflated, her plastic skin wrinkled and shrunken, the bulk of her is now the living trail of warpath specs. "Leslie! You have to stop!"

"What?" Her sunken face flops over to look at me.

"The reason you came here is because you believe there's more to living than just killing. You can't start your new life like this. Whether you like it or not, you and Edward are part of the same entity now."

"Umm, it's a little too late for that." The specs, I can see now, are all returning. Leslie props herself up on an elbow and slowly inflates. "It was quite easy, actually. I think you really weakened him with all those attacks."

"Hey, thanks. Y'know, he acted like I didn't even touch him."

"Pride isn't a strictly human emotion," Leslie sits up. Her entire body creaks like a rusty hinge. She pauses, still inflating. And inflating. In fact she keeps growing well past her original, willowy self and when she finally stands up Leslie has become large, thick and heavy with a distended belly.

"Edward's dead?" I ask.

"Well, not yet. I have to incorporate his neuron specs into my own network, but once that's done he'll be completely digested."

"Isn't there something you can do?" I plead. "Can't you just . . . put him back?"

She considers this. "Well, the raid was such a success I'm going to have to bud a new colony. I could make it so the new colony has only Edward's neuron specs. He'd have to grow a new body, but he'd have the same mind, essentially."

Leslie and I move out of the condos, end up getting a nice place in the suburbs. I see Edward and Aleksa sometimes at the Faculty Club, walking hand in hand. They get a lot more conspicuous stares now than they ever did before—mostly because Edward looks like a six-year-old. He's a new colony, after all. But I'm sure in time he'll grow into himself. ○

NEOSAUR

Swirling in a charybdis
of blue scented
water

like a long necked koi
with thalidomide
fins,

my six-year-old daughter's
pet, a miniature
beast

retro-sourced from buried
code in the chicken
genome, is

lifelessly flushed away to
the chemical tarpits of
New La Brea,

Charlotte's tears falling mutely,
like gentle post-diluvian
rain.

—Robert Borski



THE JAGUAR HOUSE, IN SHADOW

Aliette de Bodard

Aliette de Bodard's first novel, the Aztec fantasy *Servant of the Underworld*, was released in the United Kingdom by Angry Robot and is forthcoming in September in the US. Her new story is set in the recurring universe of Xuya, where the Chinese discovered America before Columbus and radically changed the history of the continent. Other stories in this series have appeared in *Interzone*.

The mind wanders, when one takes teonanácatl.

If she allowed herself to think, she'd smell bleach, mingling with the faint, rank smell of blood; she'd see the grooves of the cell, smeared with what might be blood or feces.

She'd remember—the pain insinuating itself into the marrow of her bones, until it, too, becomes a dull thing, a matter of habit—she'd remember dragging herself upward when dawn filters through the slit-windows: too tired and wan to offer her blood to Tonatiuh the sun, whispering a prayer that ends up sounding more and more like an apology.

The god, of course, will insist that she live until the end, for life and blood are too precious to be wasted—no matter how broken or useless she's become, wasting away in the darkness.

Here's the thing: she's not sure how long she can last.

It was Jaguar Captain Palli who gave her the teonanácatl—opening his hand to reveal the two black, crushed mushrooms, the food of the gods, the drugs of the lost, of the doomed—she couldn't tell if it was because he pitied her, or if it's yet another trap, another ambush they hope she'll fall into.

But still . . . She took them. She held them, wrapped tight in the palms of her hands, as the guards walked her back. And when she was alone once more, she stared at them for a long while, feeling the tremor start in her fingers—the hunger, the craving for normality—for oblivion.

The mind wanders—backward, into the only time worth remembering.

The picture lay on the table, beside Onalli's bloodied worship-thorns. It showed a girl standing by a stall in the marketplace, holding out a clock of emerald-green quetzal feathers with an uncertain air, as if it would leap and bite at any moment. Two other girls stood silhouetted in the shadows behind her, as if already fading into insignificance.

It wasn't the best one Onalli had of Xochitl, by a large margin—but she'd been thinking about it a lot, those days—about the fundamental irony of it, like a god's ultimate joke on her.

"Having second thoughts?" Atcoatl asked, behind her.

Onalli's hand reached out, to turn the picture over—and stopped when his tone finally sank in.

She turned to look at him: his broad, tanned face was impassive—a true Knight's, showing none of what he felt.

"No," she said, slowly, carefully. "I'm not having second thoughts. But you are, aren't you?"

Atcoatl grimaced. "Onalli—"

He was the one who'd helped her, from the start—getting her the encrypted radio sets, the illicit nanos to lower her body temperatures, the small syringes containing everything from *teonanácatl* inhibitors to endurance nanos. More than that: he had believed her—that her desperate gamble would work, that they'd retrieve Xochitl alive, out of the madness the Jaguar House had become. . . .

"This is too big," Atcoatl said. He shook his head, and Onalli heard the rest, the words he wasn't saying.

What if we get caught?

Onalli chose the easiest way to dispel fear: anger. "So you intend to sit by and do nothing?"

Atcoatl's eyes flashed with a burning hatred—and no wonder. He had seen the fall of his own House; his fellow Eagle Knights, bound and abandoned in the burning wreckage of their own dormitories; the Otter and the Skull Knights, killed, maimed, or scattered to breathe dust in the silver mines. "I'm no coward. One day, the Revered Speaker and his ilk will pay for what they've done. But this—this is just courting death."

Onalli's gaze strayed again to the picture—to Xochitl's face, frozen in that moment of dubious innocence. "I can't leave her there."

"The resistance—" Atcoatl started.

Onalli snorted. "By the time the resistance can pull the House down, it will be too late. You know it." There had been attacks: two maglev stations bombed; political dissidents mysteriously vanishing before their arrest. She didn't deny the existence of an underground movement, but she recognized the signs: it was still weak, still trying to organize itself.

Atcoatl said nothing; but Onalli was Jaguar Knight, and her training enabled her to read the hint of disapproval in his stance.

"Look," she said, finally. "I'm the one taking the biggest risk. You'll be outside the House, with plenty of time to leave if anything goes wrong."

"If you're caught—"

"You think I'd turn on you?" Onalli asked. "After all they've done to Xochitl, you think I'd help them?"

Atcoatl's face was dark. "You know what they're doing, inside the House."

She didn't—but she could imagine it, all too well. Which was why she needed to pull Xochitl out. Her friend hadn't deserved this; any of this. "I'm Jaguar Knight," she said, softly. "And I give you my word that I'd rather end my own life than let them worm anything out of me."

Atcoatl looked at her. "You're sincere, but what you believe doesn't change anything."

"Doesn't it? I believe the Revered Speaker's rule is unlawful. I believe the Jaguar House had no right to betray its own dissidents, or interrogate them. Isn't that what we all believe in?"

Atcoatl shifted, and wouldn't answer.

"Tell me what you believe in, then," Onalli said.

He was silent for a while. "Black One take you," he said, savagely. "Just this once, Onalli. Just this once."

Onalli nodded. "Promise." Afterward, they'd go north—into the United States or Xuya, into countries where freedom was more than a word on paper. They'd be safe.

She finished tying her hair in a neat bun—a habit she'd taken on her missions abroad—and slid her worship-thorns into her belt, smearing the blood over her skin-suit. A prayer, for whoever among the gods might be listening tonight; for Fate, the Black One, the god of the Smoking Mirror, who could always be swayed or turned away, if you had the heart and guts to seize your chance when it came.

Atcoatl waited for her at the door, holding it open with ill grace.

"Let's go," Onalli said.

She left the picture on the table—knowing, all the while, why she'd done so: not because it would burden her, but because of one simple thing. Fear. Fear that she'd find Xochitl and stare into her face, and see the broken mind behind the eyes—nothing like the shy, courageous girl she remembered.

Outside, the air was clear and cold, and a hundred stars shone upon the city of Tenochtitlan: a hundred demons, waiting in the darkness to descend and rend all life limb from limb. Onalli rubbed her worship-thorns, trying to remember the assurance she'd always felt on her missions—why couldn't she remember anything, now that she was home—now that she was breaking into her own House?

Six months ago

The priest of the Black One sits cross-legged across the mat—facing Xochitl and pursing his lips as if contemplating a particular problem. His hair is greasy and tangled, matted with the blood of his devotions; and the smell that emanates from him is the rank one of charnel houses—with the slight tang of bleach. He's attempted to wash his hands before coming, and hasn't succeeded.

Amusing, how the mind sharpens, when everything else is restrained.

Xochitl would laugh, but she's never been much of one for laughter: that was Onalli, or perhaps Tecipiani.

No, she musn't think of Tecipiani, not now—must remain calm and composed, her only chance at surviving this.

Mustn't ask herself the question "for what?"

"I'm told," the priest says, "that you started a ring of dissidents within this House."

Xochitl remains seated against the wall, very straight. The straps cut into her arms and ankles, and the tightest one holds her at the neck. She'll only exhaust herself trying to break them: she's tried a dozen times already, with only bruises to show for it.

The priest goes on, as if she had answered, "I'm told you worked to undermine the loyalty of the Jaguar Knights, with the aim to topple the Revered Speaker."

Xochitl shakes her head, grimly amused. Toppling him—as if that would work . . . The burgeoning resistance movement is small and insignificant; they have no reach within the House, not even to Xochitl's pathetic, shattered splinter group.

But there's right and wrong, and when Xolotl comes to take her soul, she'll face Him with a whole face and heart, knowing which side she chose.

The priest goes on, smug, self-satisfied, "You must have known it was doomed. This House is loyal; your commander is loyal. She has given you up, rather than suffer your betrayal."

Tecipiani—no, mustn't think of that, mustn't—it's no surprise, has never been, not after everything Tecipiani has done. . . .

"Of course she has given me up," Xochitl says, keeping her voice steady. "Jaguar Knights aren't interrogators. We leave that to you."

The priest shifts, unhurriedly—and, without warning, cuffs her, his obsidian rings cutting deep into her skin. She tastes blood, an acrid tingle in her mouth—raises her head, daring him to strike again.

He does—again and again, each blow sending her head reeling back, a white flash of pain resonating in the bones of her cheek, the warmth of blood running down her face.

When he stops at last, Xochitl hangs limp, staring at the floor through a growing haze—the strap digging into her windpipe, an unpleasant reminder of how close asphyxiation is.

"Let's start again, shall we?" His voice is calm, composed. "You'll show me proper respect, as is owed an agent of the Revered Speaker."

He's—not that—he's nothing, a man of no religion, who dares use pain as a weapon, tainting it for mundane things like interrogation. But pain isn't that, was never that. Xochitl struggles to remember the proper words; to lay them at the feet of the Black One, her song of devotion in this godless place.

"I fall before You, I throw myself before You

Offer up the precious water of my blood, offer up my pain like fire

I cast myself into the place from where none rise, from where none leave,

O lord of the near and nigh, O master of the Smoking Mirror,

O night, O wind . . ."

She must have spoken the words aloud, because he cuffs her again—a quick, violent blow she only feels when her head knocks against the wall—ringing in her mind, the whole world contracting and expanding, the colors too light and brash—

And again, and again, and everything slowly merges, folding inward like crinkling paper—pain spreading along her muscles like fire.

"With icy water I make my penance

With nettles and thorns I bare out my face, my heart

Through the land of the anguished, the land of the dying . . ."

She thinks, but she's not sure, that he's gone, when the door opens again, and footsteps echo under the ceiling—slow and measured, deliberate.

She'd raise her head, but she can't muster the energy. Even focusing on the ground is almost too tiring, when all she wants is to lean back, to close her eyes and dream of a world where Tonatiuh the sun bathes her in His light, where the smell of cooking oil and chilies wafts from the stalls of food-vendors, where feather-cloaks are soft and silky against her hands. . . .

The feet stop: leather moccasins, and emerald-green feathers, and the tantalizing smell of pine cones and copal incense.

Tecipiani. No, not the girl she knew anymore, but Commander Tecipiani, the one who sold them all to the priests—who threw Xochitl herself to the star-demons, to be torn apart and made as nothing.

"Come to gloat?" Xochitl asks; or tries to, because it won't come out as more than a whisper. She can't even tell if Tecipiani hears her, because the world is pressing against her, a throbbing pain in her forehead that spreads to her field of vision—until everything dissolves into feverish darkness.

Onalli took the ball-court at a run, descending from the stands into the I-shape of the ground. On either side of her loomed the walls, with the vertical stone-hoops teams would fight to send a ball through—but it was the season of the Lifting of the Banners, and the teams were enjoying a well-earned rest.

It did mean, though, that only one imperial warrior guarded the cordoned-off entrance: it had been child's play to take him down.

One thing people frequently forgot about the ball-court was that it was built with its back against the Jaguar House, and that the dignitaries' boxes at the far end shared a wall with the House's furthest courtyard.

That courtyard would be guarded, but it was nothing insurmountable. She'd left Atcoatl at the entrance, disguised as an imperial warrior: from afar, he'd present a sufficient illusion to discourage investigation; and he'd warn her by radio if anything went wrong outside.

The boxes were deserted; Onalli made her way in the darkness to that of the Revered Speaker, decorated with old-fashioned carvings depicting the feats of gods: the Feathered Serpent coming back from the underworld with the bones of mankind, the Black One bringing down the Second Sun in a welter of flames and wind.

The box was the highest one in the court; but still lacking a good measure or so to get her over the wall—after all, if there was the remotest possibility that anyone could leap through there, they'd have guarded it to the teeth.

Onalli stood for a while, breathing quietly. She rubbed her torn ears, feeling a trickle of blood seep into her skin. For the Black One, should He decide to watch over her, For Tonatiuh the Sun, who would tumble from the sky without His nourishment.

For Xochitl, who'd deserved better than the fate Tecipiani had dealt her.

She extended, in one fluid, thoughtless gesture: her nails were diamond-sharp, courtesy of Atcoatl's nanos, and it was easy to find purchases on the carvings—not thinking of the sacrilege, of what the Black One might think about fingers clawing their way through His effigies, no time for that anymore. . . .

Onalli hoisted herself up on the roof of the box, breathing hard. The wall in front of her was much smoother, but still offered some purchase as long as she was careful. It was, really, no worse than the last ascension she'd done, clinging to the outside of the largest building in Jiajin Tech's compound, on her way to steal blueprints from a safe. It was no worse than endless hours of training, when her tutors had berated her about carelessness. . . .

But her tutors were dead, or gone to ground—and it was the House on the other side of that wall, the only home she'd ever known—the place that had raised her from childhood, the place where she could be safe, and not play a game of endless pretense—where she could start a joke and have a dozen people voicing the punchline, where they sang the hymns on the winter solstice, letting their blood pool into the same vessel.

Her hands, slick with sweat, slid out of a crack. For one impossibly long moment she felt herself fall into the darkness—caught herself with a gasp, even as chunks of rock fell downward in a clatter of noise.

Had anyone heard that? The other side of the wall seemed silent—

There was only darkness, enclosing her like the embrace of Grandmother Earth. Onalli gritted her teeth, and pushed upward, groping for further handholds.

Two years ago

Commander Tecipiani's investiture speech is subdued, and uncharacteristically bleak. Her predecessor, Commander Malinalli, had delivered grandiloquent boasts about the House and its place in the world, as if everything was due to them, in this Age and the next.

But Tecipiani says none of that. Instead, she speaks of dark times ahead, and the need to be strong, and the need to endure.

She doesn't say the words "civil war," but everyone can hear them, all the same.

Xochitl and Onalli stand near the back. Because Onalli arrived late and Xochitl waited for her, the only place they could find was near the novices: callow boys and girls, uneasily settling into their cotton uniforms and fur cloaks, still too young to feel their childhood locks as burdens—still so young and innocent it almost hurts, to think of them in the times ahead.

After the ceremony, everyone drifts back to their companies, or to the mess halls. The mistress of the novices has organized a mock battle in the courtyard, and Onalli is watching with the same rapt fascination she might have for a formal ball game.

Xochitl is watching Tecipiani: the Commander has finished shaking hands with her company leaders, and, dismissing her bodyguards, is heading straight toward them. Her gaze catches Xochitl's—holds it for a while, almost pleading.

"Onalli," Xochitl says, urgently.

Onalli barely looks up. "I know. It had to happen at some point, anyway."

Tecipiani catches up with them, greets them both with a curt nod. She's still wearing the full regalia of the Commander: a cloak of jaguar-fur, and breeches of emerald-green quetzal feathers. Her helmet is in the shape of a jaguar's head, and her face pokes out from between the jaws of the animal, as if she were being consumed alive.

"Walk with me, will you?" she asks. Except that she's not asking, not anymore, because she speaks with the voice of the Black One, and even her slightest suggestion is a command.

They don't speak, for a while—walking through courtyards where Knights haggle over *patolli* gameboards, where novices dare each other to leap over the fountains: the familiar, comforting hubbub of life within the House.

"I wasn't expecting you so soon, Onalli—though I'm glad to see you have returned," Tecipiani says. Her words are warm; her voice isn't. "I trust everything went well?"

Onalli spreads her hands in a gesture of uncertainty. "I have the documents," she says. "Williamsburg Tech was making a new prototype of computer, with more complexity. A step away from consciousness, perhaps."

Xochitl wonders what kind of intelligence computers will develop, when they finally breach the gap between automated tasks and genuine sentience—all that research done in military units north of the border, eyeing the enemy to the south.

They'll be like us, she thinks. They'll reach for their equivalent of clubs or knives, claiming it's just to protect themselves; and it won't be long until they sink it into somebody's chest.

Just like us.

"The Americans have advanced their technology, then," Tecipiani says, gravely. It's the House's job, after all: watching science in the other countries of the Fifth World, and making sure that none of them ever equals Greater Mexica's lead in electronics—using whatever it takes, theft, bribery, assassination.

Onalli shakes her head impatiently. "This isn't something we should worry about."

"Perhaps more than you think." Tecipiani's voice is slightly annoyed. "The war won't always last, and we must look ahead to the future."

Onalli says, "The war, yes. You made an interesting speech."

Tecipiani's smile doesn't stretch all the way to her eyes. "Appropriate, I felt. Sometimes, we have to be reminded of what happens out there."

Onalli says, "I've seen what's out there. It's getting ugly."

"Ugly?" Xochitl asks.

Onalli's eyes drift away. "I saw him at court, Xochitl. Revered Speaker Ixtli. He's—" her hands clench, "—a maddened dog. It's in his eyes, and in his bearing. It won't be long before the power goes to his head. It's already started. The war—"

Tecipiani shakes her head. "Don't you dare make such a statement." Her voice is

curt, as cutting as an obsidian blade. "We are Jaguar Knights. We serve the Mexica Empire and its Revered Speaker. We're nothing more than that. Never."

"But—" Xochitl starts.

"We're nothing more than that," Tecipiani says, again.

No, that's not true. They're Jaguar Knights; they've learnt to judge people on a word or a gesture—because, when you're out on a mission, it marks the line between life and death. They know . . .

"You're mad," Onalli says. "Back when Commander Malinalli was still alive, all the Houses, all the Knights spoke against Ixtli—including ours. What do you think the Revered Speaker will do to us, once he's asserted his power?"

"I'm your Commander," Tecipiani says, her voice slightly rising. "That, too, is something you must remember, Jaguar Lieutenant. I speak for the House."

"I'll remember." Onalli's voice is low and dangerous. And Xochitl knows that here, now, they've reached the real parting of the ways—not when Tecipiani was appointed company leader or commander, not when she was the one who started assigning missions to her old friends—but this, here, now, this ultimate profession of cowardice.

"Good," Tecipiani says. She seems oblivious to the undercurrents, the gazes passing between Onalli and Xochitl. But then, she's never been good with details. "You'll come to my office later, Onalli. I'll have another mission for you."

And that, too, is cowardice: what she cannot control, Tecipiani will get rid of. Xochitl looks at Onalli—and back at her Commander, who still hasn't moved—and she feels the first stirrings of defiance flutter in her belly.

Onalli dropped the last few handspans into the courtyard, and immediately flattened herself against the wall—a bad reflex. There was a security camera not a few handspans from her, but all it would see in the darkness was another blur: her skin-suit was made of insulating materials, which wouldn't show up on infrared, and she'd taken nanos to lower her skin temperature. There'd be fire and blood to pay later, but she didn't really care anymore.

Everything was silent, too much so. Where were the guards and the security—where was Tecipiani's iron handhold on the House? She'd felt the fear from outside—the wide, empty space in front of the entrance; the haunted eyes of the Jaguar Captain she'd pumped for information on the maglev; all the horror stories she'd heard on her way into Tenochtitlan.

And yet . . .

The back of her scalp prickled. A trap. They'd known she was coming. They were expecting her.

But she'd gone too far to give up; and the wall had been a bitch to climb, anyway.

She drew the first of her throwing knives, and, warily, progressed deeper into the House. Still nothing—the hungry silence of the stars—the warm breath of Grandmother Earth underfoot—the numinous presence of Xolotl, god of Death, walking in her footsteps. . . .

A shadow moved across the entrance to the courtyard, under the vague shapes of the pillars. Onalli's hand tightened around the haft of the knife. Staying motionless would be her demise. She had to move fast, to silence them before they could raise the alarm.

She uncoiled—leapt, with the speed of a rattlesnake, straight toward the waiting shadow. Her knife was meant to catch the shadow in the chest, but it parried with surprising speed. All she could see of the shadow was a smear in the darkness, a larger silhouette that seemed to move in time with her. The shadow wasn't screaming; all its energy was focused into the fight, pure, incandescent, the dance that gave

the gods their due, that kept Tonatiuh the sun in the sky and Grandmother Earth sated, the one they'd both trained for, all their lives.

There was something wrong, very wrong with the way the shadow moved. . . . She parried a slash at her legs, and pressed it again, trying to disarm him.

In the starlight, she barely saw the sweeping arc of its knife, moving diagonally across her weak side—she raised her own blade to parry, caught the knife and sent it clattering to the ground, and moved in for the kill.

Too late, she saw the second blade. She threw herself backward, but not before it had drawn a fiery slash across her skin-suit.

They stood, facing one another, in silence.

"You—you move like us," the shadow said. The voice was high-pitched, shaking, and suddenly she realized what had been wrong with its moves: the eagerness, the abandon of the unblooded novices.

"You're a boy," she breathed. "A child."

Black One, no.

"I'm no child." He shifted, in the starlight, letting her catch a glimpse of his gangly awkwardness. "Don't make that mistake."

"I apologize." Onalli put all the contriteness she could in her voice; she softened the muscles of her back to hunch over in a submissive position: he might not be able to see her very well, but he'd still see enough to get the subconscious primers.

The boy didn't move. Finally he said, as if this were an everyday conversation. "If I called, they would be here in a heartbeat."

"You haven't called." Onalli kept her voice steady, trying to encourage him not to remedy this oversight.

In the starlight, she saw him shake his head. "I'd be dead before they came."

"No," Onalli said, the word torn out of her before she could plan for it. "I'm not here to kill you."

"I believe you." A pause, then, "You've come for the House. To avenge your own."

Her own? And then she understood. He thought her a Knight; but not of the Jaguar. An Eagle, perhaps, or an Otter: any of the former elite of Greater Mexico, the ones Revered Speaker Ixtli had obliterated from the Fifth World.

She'd forgotten that this was no mere boy, but a novice of her order, who would one day become a Knight, like her, like Tecipiani, like Xochitl. He'd heard and seen enough to know that she hated the House's heart and guts; but he hadn't yet connected it with who she was.

"I'm just here for a friend," Onalli said. "She—she needs help."

"Help." His voice was steadier, almost thoughtful. "The kind of help that requires infiltration, and a knife."

She had more than knives: all the paraphernalia of Knights on a mission, stunguns, syringes filled with endurance and pain nanos. But she hadn't got them out. She wasn't sure why. Tecipiani had turned the House into something dark that needed to be put down, and she'd do whatever it took. And yet . . .

It was still her House. "She's in the cells," Onalli said.

"In trouble," the boy repeated, flatly. "I'm sure they wouldn't arrest her without a good reason."

Black One take him, he was so innocent, so trusting in the rightness of whatever the House did; like her or Xochitl, ages before their eyes opened. She wanted to shake him. "I have no time to argue with you. Will you let me pass?"

The boy said nothing for a while. She could feel him wavering in the starlight—and, because she was a Jaguar Knight, she also knew that it wouldn't be enough, that he'd call for the guards, rather than entrusting himself to some vague stranger who had tried to kill him.

No choice, then.

She moved before he could react—shifting her whole weight toward him and bearing him to the ground, even as her hand moved to cover his mouth. As they landed, there was a crunch like bones breaking—for a moment, she thought she'd killed him, but he was still looking at her in disbelief, trying to bite her—with her other hand, she reached into her skin-suit, and withdrew a syringe.

He gasped when she injected him, his eyes rolling up, the cornea an eerie white in the starlight. Now that her eyes were accustomed to the darkness, she could see him clearly: his skin smooth and dark, his hands clenching, then relaxing as the *teonanácatl* inhibitor took hold.

She could only hope that she'd got the doses right: he was wirier than most adults, and his metabolism was still that of a child.

As she left the courtyard, he was twitching, in the grip of the hallucinations that came as a side effect. With luck, he'd wake up with a headache, and a vague memory of everything not being quite right—but not remember the vivid nightmares the drug gave. She thought of beseeching the gods for small or large mercies; but the only two in her wake were the Black One and Xolotl, the Taker of the Dead.

"I'm sorry," she whispered, knowing he couldn't hear her; knowing he would hate and fear her for the rest of his days.

"But I can't trust the justice of this House—I just can't."

Nine years ago

Xochitl stands by the stall, dubiously holding the cloak of quetzal-feathers against her chest. "It's a little too much, don't you think?"

"No way," Onalli says.

"If your idea of clothing is tawdry, sure," Tecipiani says, with an amused shake of her head. "This is stuff for almond-eyed tourists."

And, indeed, there are more Asians at the stall than trueblood Mexica—though Onalli, who's half and half, could almost pass for Asian herself. "Aw, come on," Onalli says. "It's perfect. Think of all the boys queuing for a kiss. You'd have to start selling tickets."

Xochitl makes a mock stab at Onalli, as if withdrawing a knife from under her tunic. But her friend is too quick, and steps aside, leaving her pushing at empty air.

"What's the matter? Eagles ate your muscles?" Onalli says—always belaboring the obvious.

Xochitl looks again at the cloak—bright and garish, but not quite in the right way. "No," she says, finally. "But Tecipiani's right. It's not worth the money." Not even for a glance from Palli—who's much too mature, anyway, to get caught by such base tricks.

Tecipiani, who seldom brags about her triumphs, simply nods. "There's another stall further down," she says. "Maybe there'll be something—"

There's a scream on the edge of the market: not that of someone being robbed, but that of a madman.

What in the Fifth World—

Xochitl puts back the cloak, and shifts, feeling the reassuring heaviness of the obsidian blades at her waist. Onalli has already withdrawn hers; but Tecipiani has moved before them all, striding toward the source. Her hands are empty.

Ahead, at the entrance to the marketplace, is a grounded aircar, its door gaping empty. The rest of the procession that was following it is slowly coming to a stop—

though with difficulty, as there is little place among the closely crammed stalls for fifteen aircars.

The sea of muttering faces disembarking from the aircars is a hodgepodge of colors, from European to Asian, and even a few Mexica. They wear banners proudly tacked to their backs, in a deliberately old-fashioned style: coyotes and rabbits drawn in featherwork spread out like fans behind their heads.

It's all oddly familiar and repulsive at the same time, a living remnant of another time. "Revivalists," Xochitl says, aloud.

Which means—

She turns, scanning the marketplace for a running man: the unwilling sacrifice victim, the only one who had a reason to break and run.

What Xochitl sees, instead, is Tecipiani, walking determinedly into a side aisle of the marketplace as if she were looking for a specific stall.

The revivalists are gathering, harangued by a blue-clad priest who is organizing search parties.

"Idiots," Onalli curses under her breath. She's always believed more in penance than in human sacrifice; and the Revivalists have always rubbed her the wrong way. Xochitl isn't particularly religious, and has no opinion either way.

"Come on," she says.

They find Tecipiani near the back of the animals section—and, kneeling before her, is a hunched man, still wearing the remnants of the elaborate costume that marked him as the sacrifice victim. He's shivering; his face contorts as he speaks words that Xochitl can't make out amidst the noises of the chattering parrots and screaming monkeys in their metal cages.

As they come closer, Tecipiani makes a dismissive gesture; and the man springs to life, running away deeper into the marketplace.

"The search party is coming this way," Onalli says.

Tecipiani doesn't answer for a while: she's looking at the man—and, as she turns back toward her friends, Xochitl sees burning hope and pity in her gaze.

"They won't catch him," she says. "He's strong, and fast. He'll make it."

Onalli looks as though she might protest, but doesn't say anything.

"We should head back," Tecipiani says, finally. Her voice is toneless again; her eyes dry and emotionless.

On their way back, they meet the main body of the search party: the fevered eyes of the priest rest on them for a while, as if judging their fitness as replacements.

Tecipiani moves, slightly, to stand in the priest's way, her smile dazzling and threatening. She shakes her head, once, twice. "We're not easy prey," she says, aloud.

The priest focuses on her; and, after a long, long while, his gaze moves away. Too much to chew. Tecipiani is right: they won't be bested so easily.

They walk on, through the back streets by the marketplace, heading back to the House to find some shade.

Nevertheless, Xochitl feels as though the sunlight has been blotted out. She shivers. "They're sick people."

"Just mad," Onalli says. "Don't think about them anymore. They're not worth your time."

She'd like to—but she knows that the priest's eyes will haunt her nightmares for the months to come. And it's not so much the madness; it's just that it doesn't make sense at all, this frenzy to spread unwilling, tainted blood.

Tecipiani waits until they're almost back to the House to speak. "They're not mad, you know."

"Yeah, sure," Onalli says.

Tecipiani's gaze is distant. "There's a logic to it. Spreading unwilling blood is a sin,

but Tonatiuh needs blood to continue shining down on us. Grandmother Earth needs blood to put forth maize and cotton and nanomachines."

"It's still a fucking sin, no matter which way you take it." Onalli seems to take the argument as a challenge.

Tecipiani says nothing for a while. "I suppose so. But still, they're only doing what they think is good."

"And they're wrong," Xochitl says, with a vehemence that surprises her.

"Perhaps," Tecipiani says. "And perhaps not. Would you rather take the risk of the world ending?" She looks up, into the sky. "Of all the stars falling down upon us, monsters eager to tear us apart?"

There's silence, then. Xochitl tries to think of something, of anything to counter Tecipiani, but she can't. She's been too crafty. She always is.

"If you believe that," Onalli says, with a scowl, "why did you let him go?"

Tecipiani shakes her head, and in her eyes is a shadow of what Xochitl saw, back in the marketplace—pity and hope. "I said I understood. Not that I approved. I wouldn't do anything I didn't believe in whole-heartedly. I never do."

And that's the problem, Xochitl thinks. It will always be the problem. Tecipiani does what she believes in; but you're never sure what she's truly thinking.

The cell was worryingly easy to enter, once Onalli had dealt with the two guards at the entrance—who, even though they were Jaguar Specialists barely a step above novices, really should have known better. She had gone for the windpipe of the first, and left a syringe stuck in the shoulder of the second, who was out in less time than it took her to open the door.

Inside, it was dark, and stifling. A rank smell, like the mortuary of a hospital, rose as she walked.

"Xochitl?" she whispered.

There was no noise. But against the furthest wall was a dark lump—and, as she walked closer, it resolved into a slumped human shape.

Black One, no. Please watch over her, watch over us all . . .

Straps and chains held Xochitl against the wall, and thin tubes snaked upward, into a machine that thrummed like a beating heart.

Teonanácatl, and *peyotl*, and truth-serum, and the gods knew what else. . . .

It was only instinct that kept her going forward: a horrified, debased part of her that wouldn't stop, which had to analyze the situation no matter what. She found the IVs by touch—feeling the hard skin where the syringes had rubbed—the bruises on the face, the broken nose—the eyes that opened, not seeing her.

"Xochitl. Xochitl. It's all right. I'm here. Everything is going to be all right. I promise."

But the body was limp; the face distorted in a grimace of terror; and there was, indeed, nothing left of the picture she'd held on to for so long.

"Come on, come on," she whispered, fiddling with the straps—her sharpened nails catching on the leather, fumbling around the knots.

The cold, detached part of her finally took control; and, forcing herself not to think of what she was doing, she cut through the straps, one by one—pulled out the IVs, and gently disengaged the body, catching its full weight on her arms.

Xochitl shuddered, a spasm like that of a dying woman. "Tecipiani," she whispered. "No. . . ."

"She's not here," Onalli said. Gently, carefully, she rose with Xochitl in her arms, cradling her close, like a hurt child.

Black One take you, Tecipiani. Oblivion's too good for the likes of you. I hope you burn in the Christian Hell, with the sinners and the blasphemers and the traitors. I hope you burn. . . .

She was halfway out of the House, trudging through the last courtyard before the novices' quarters, when she became aware she wasn't alone.

Too late.

The lights came on, blinding, unforgiving.

"I always knew you'd come back, Onalli," a voice said. "No matter how hard I tried to send you away."

Black One take her for a fool. Too easy. It had been too easy, from beginning to end: just another of her sick games.

"Black One screw you," Onalli spat into the brightness. "That's all you deserve, isn't it, Tecipiani?"

The commander was just a silhouette—standing, by the sound of her, only a few paces away. But Xochitl lay in Onalli's arms, a limp weight she couldn't toss aside, even to strike.

Tecipiani didn't speak; but of course she'd remain silent, talking only when it suited her.

"You sold us all," Onalli whispered. To the yellow-livered dogs and their master, to the cudgels and the syringes. . . . "Did she mean so little to you?"

"As little or as much as the rest," Tecipiani said.

Onalli's eyes were slowly accustoming themselves to the light, enough to see that Tecipiani's arms were down, as if holding something. A new weapon—or just a means to call on her troops?

And then, with a feeling like a blade of ice slid through her ribs, Onalli saw that it wasn't the case. She saw what Tecipiani was carrying: a body, just like her: the limp shape of the boy she'd downed in the courtyard.

"You—" she whispered.

Tecipiani shifted. Her face, slowly coming into focus, could have been that of an Asian statue—the eyes dry and unreadable, the mouth thinned to a darker line against her skin. "Ezpetlatl, of the Atempan *calpulli* clan. Given into our keeping fifteen years ago."

Shame warred with rage, and lost. "I don't care. You think it's going to atone for everything else you did?"

"Perhaps," Tecipiani said. "Perhaps not." Her voice shook, slightly—a bare hint of emotion, not enough, never enough. "And you think rescuing Xochitl was worth his life?"

Onalli scanned the darkness, trying to see how many guards were there—how many of Tecipiani's bloodless sycophants. She couldn't take them all—fire and blood, she wasn't even sure she could take Tecipiani. But the lights were set all around the courtyard—on the roofs of the buildings, no doubt—and she couldn't make out anything but the commander herself.

As, no doubt, Tecipiani had meant all along. Bitch.

"You're stalling, aren't you?" Onalli asked. "This isn't about me. It has never been about me." About you, Tecipiani; about the House and the priests and Xochitl. . . .

"No," Tecipiani agreed, gravely. "Finally, something we can agree on."

"Then why Xochitl?" A cold certainty was coalescing in her belly, like a snake of ice. "You wanted us both, didn't you?"

"Oh, Onalli." Tecipiani's voice was sad. "I though you'd understood. This isn't about you, or Xochitl. It's about the House."

How could she say this? "You've killed the House," Onalli spat.

"You never could see into the future," Tecipiani said. "Even two years ago, when you came back."

"When you warned us about betrayal? You're the one who couldn't see the Revered Speaker was insane, you're the one who—"

"Onalli." Tecipiani's voice held the edge of a knife. "The House is still standing."

"Because you sold it."

"Because I compromised," Tecipiani said.

"You—" Onalli choked on all the words she was trying to say. "You poisoned it to the guts and the brain, and you're telling me about compromise?"

"Yes. Something neither you or Xochitl ever understood, unfortunately."

That was too much—irreparable. Without thought, Onalli shifted Xochitl onto her shoulder, and moved, her knife swinging free of its sheath—going for Tecipiani's throat. If she wouldn't move, wouldn't release her so-called precious life, too bad—it would be the last mistake she'd ever make—

She'd half-expected Tecipiani to parry by raising the body in her arms—to sacrifice him, as she'd sacrificed so many of them—but the commander, as quick as a snake, knelt on the ground, laying the unconscious boy at her feet—and Onalli's first swing went wide, cutting only through air. By the time she'd recovered, Tecipiani was up on her feet again, a blade in her left hand.

Onalli shifted, and pressed her again. Tecipiani parried; and again, and again.

Neither of them should have the upper hand. They were both Jaguar Knights; Tecipiani might have been a little less fit, away from the field for so long—but Onalli was hampered by Xochitl's body, whom she had to keep cradled against her.

Still—

Still, Tecipiani's gestures were not as fast as they should have been. Another one of her games?

Onalli didn't care, not anymore. In one of Tecipiani's over-wide gestures, she saw her opening—and took it. Her blade snaked through; connected, sinking deep above the wrist.

Tecipiani jumped backward—her left hand dangled uselessly, but she'd shifted her knife to the right—and, like many left-handers, she was ambidextrous.

"You're still good," Tecipiani admitted, grudgingly.

Onalli looked around once more—the lights were still on—and said, "You haven't brought anyone else, have you? It's just you and me."

Tecipiani made a curt nod; but, when she answered, it had nothing to do with the question. "The House still stands." There was such desperate intensity in her voice that it stopped Onalli, for a few seconds. "The Eagle Knights were burnt alive; the Otters dispersed into the silver mines to breathe dust until it killed them. The Coyotes died to a man, defending their House against the imperial guards."

"They died with honor," Onalli said.

"Honor is a word without meaning," Tecipiani said. Her voice was steady once more. "There are five hundred Knights in this House, out of which one hundred are unblooded children and novices. I had to think of the future."

Onalli's hands clenched. "And Xochitl wasn't part of the future?"

Tecipiani didn't move. "Sacrifices were necessary. Who would turn on their own, except men loyal to the Revered Speaker?"

The cold was back in her guts, and in her heart. "You're sick," Onalli said. "This wasn't worth the price of our survival—this wasn't—"

"Perhaps," Tecipiani said. "Perhaps it was the wrong thing to do. But we won't know until long after this, will we?"

That gave her pause—so unlike Tecipiani, to admit she'd been wrong, to put her acts into question. But still—still, it changed nothing.

"And now what?" Onalli asked. "You've had your game, Tecipiani. Because that's all we two were ever to you, weren't we?"

Tecipiani didn't move. At last, she made a dismissive gesture. "It could have gone both ways. Two Knights, killed in an escape attempt tragically gone wrong . . ." She

spoke as if nothing mattered anymore; her voice cool, emotionless—and that, in many ways, was the most terrifying. “Or a success, perhaps, from your point of view.”

“I could kill you,” Onalli said, and knew it was the truth. No one was perfectly ambidextrous, and, were Onalli to drop Xochitl as Tecipiani had dropped the boy, she’d have the full range of her abilities to call upon.

“Yes,” Tecipiani said. A statement of fact, nothing more. “Or you could escape.”

“Fuck you,” Onalli said. She wanted to say something else—that, when the Revered Speaker was finally dead, she and Xochitl would come back and level the House, but she realized, then, that it was only thanks to Tecipiani that there would still be a House to tear down.

But it still wasn’t worth it. It couldn’t have been.

Gently, she shifted Xochitl, catching her in her arms once more, like a hurt child. “I didn’t come here to kill you,” she said, finally. “But I still hope you burn, Tecipiani, for all you’ve done. Whether it was worth it or not.”

She walked to the end of the courtyard, into the blinding light—to the wall and the ball-court and the exit. Tecipiani made no attempt to stop her; she still stood next to the unconscious body of the boy, looking at some point in the distance.

And, all the way out—into the suburbs of Tenochtitlan, in the aircar Atcoatl was driving—she couldn’t get Tecipiani’s answer out of her mind, nor the burning despair she’d heard in her friend’s voice.

What makes you think I don’t already burn?

She’d always been too good an actress. “Black One take you,” Onalli said, aloud. And she wasn’t really sure anymore if she was asking for suffering, or for mercy.

Alone in her office once more, her hands—her thin, skeletal hands—reach for the shriveled mushrooms of the teonanácatl—and everything slowly dissolves into colored patterns, into meaningless dreams.

Even in the dreams, though, she knows what she’s done. The gods have turned Their faces away from her; and every night she wakes up with the memories of the torture chambers—the consequences of what she’s ordered, the consequences she has forced herself to face, like a true warrior.

Here’s the thing: she’s not sure how long she can last.

She burns—every day of her life, wondering if what she did was worth it—if she preserved the House, or corrupted it beyond recognition.

No. No.

Only this is worth remembering: that, like the escaped prisoner, Onalli and Xochitl will survive—going north, into the desert, into some other, more welcoming country, keeping alive the memories of their days together.

And, over Greater Mexico, Tonatiuh the sun will rise again and again, marking all the days of the Revered Speaker’s reign—the rising tide of fear and discontent that will one day topple him. And when it’s finally over, the House that she has saved will go on, into the future of a new Age: a pure and glorious Age, where people like her will have no place.

This is a thought the mind can hold. ○

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AMELIA PILLAR'S ETIQUETTE FOR THE SPACE TRAVELER

Kristine Kathryn Rusch

The Interstellar Travel Company provides this short complimentary manual for each passenger on its ships. Travelers desiring more information should buy the entire updated version of Amelia Pillar's Etiquette for the Space Traveler in the gift shop.

I. Introduction

For most travelers, a trip on an interstellar cruise ship is a once-in-a-lifetime experience. Few can afford the minimum three-month trip to the outer regions of the solar system. Even fewer can afford the year-long adventure to five nearby star systems which you are about to embark upon.

Should this trip go according to plan (and rest assured, most do), you will see native creatures in the wild, see aliens on their homeworlds, and see natural wonders beyond human imagination.

This short guide shall prepare you for all of those things.

But first, you must survive the trip itself. And for many first time travelers, the trip is the most difficult aspect of the journey.

II. The Ship

● The Suite

By now, you have arrived in your suite and you are a bit startled at its size. Even though the designers have done all they can to make the two- or three-room cabin that will be your home for the next twelve months seem large, you feel momentarily claustrophobic. This is caused, in part, by the low ceiling and the large furniture. The large furniture accommodates all of our human guests, including those of expansive girth. If you and your traveling companion do not consider yourselves expansive, summon your steward and request normal-size furniture.

Once your steward reprograms your couch and easy chairs to smaller proportions, your living area will seem quite large. However, do not request a smaller bed. Although such a request seems quite practical now on the first day of your voyage, it will not as the trip progresses.

Have your steward show you where the blinds are. While the floor-to-ceiling windows with views of space and its environs seem quite lovely at the moment, there will be times on this voyage when you do not want to be reminded that you are in a tube floating through a hostile environment, with only a thin membrane between you and the vacuum of space.

For the most part, such realities will not impinge upon your journey. But there will be moments, particularly after the first round of survival drills, when you will think that you have made a terrible mistake by leaving the safety of Earth.

At that time, remind yourself that you are an adventurer!

Adventurers explore the great beyond. You are part of a grand tradition of travelers who venture into hostile environs. The ship's library carries adventure journals going as far back as the Victorian era. Consider yourself an English gentleman riding his first elephant. Or a well-heeled nineteenth century woman venturing down the Amazon with only a parasol and native guides to protect her.

In that spirit of adventure, you will learn how to use the lifepods. You will become an expert at locking yourself in your room and establishing its own internal environmental system. You will excel at putting on your own environmental suit and sending messages through its comm links to the nearest interstellar vessels.

Look at such drills as tests of the imagination. Remember that in the century of interstellar cruising, we have only lost ten thousand ships—and more than half of those were in the difficult early years.

When you finish your first drill, you will feel a bit shaken. It is only natural. Close the blinds, pour yourself one of the nice cabernets from your en suite wine cabinet, dim the lights, and watch the living room holounit—preferably a scene from one of the places you are about to visit.

This is not the time to regret your decision! You must remember that you are an adventurer and up to each task that faces you!

● The Public Areas

Depending on the size of your ship and the number of guests, the public areas will seem either unbelievably large or amazingly cramped.

In each case, remember that you shall be traveling with the same group of people for the next 365 days. It is best not to antagonize them. Loud noises and strong odors cause the most clashes on cruise ships.

Unfortunately, both loud noises and strong odors emanate from children. Should your ship allow children in the adult common areas, make certain you go into those areas accompanied by your most tolerant attitudes.

Should you have children of your own, sniff them before you take them from your suite. If they have eaten something offensive (onions come to mind) or are in need of changing, take care of those problems before venturing into the corridor. School your children in the art of silence. Although our ancestors' adage "Children should be seen and not heard" is outdated on Earth, it should be the mantra of the cruising parent.

Even ships that allow children in the adult areas have child-only sections. We suggest that you and your children spend all of your time in those sections. You and your fellow passengers will be happy—and you will avoid the sniffing, silencing rituals that other, more insensitive parents must go through.

● Environmental Systems

The environmental systems on all Interstellar Travel Company's ships are state of the art. However, on certain stretches of the trip (particularly those trips with long distances between stops), the Earth-level gravity must be shut off so that the system can go through its weekly routine maintenance.

Some travelers get ill in zero-G. If you are one, inform your steward. You may receive permission to activate your en suite environmental system, preserving your Earth gravity.

However, true adventurers overcome their space sickness to learn the joys of traveling in zero-G.

Zero-G makes even the most jaded traveler feel like a child again. Floating is the closest we humans get to flying. On the first zero-G section of the trip, you will see even the most stodgy passenger giggling hysterically as he cartwheels weightlessly through the corridors.

Most of these zero-G adventures will only last a few hours, but one, in the very center of the year-long trip, will last two days.

This creates certain challenges. It is usually best to forgo water showers during this extended period. Instead, take a sponge-bath following the specific instructions posted on the wall of your bathroom.

Rest assured that each bathroom on the ship has straps on the toilet, plus a special seat cover that prevents your waste from floating out of the room with you. (If traveling with children, one must insist that each member of the family use the seat cover or your suite will become uninhabitable in short order.)

Dining presents its own challenges. The ship offers courses called "Dining in Zero-G." Only those who have taken the courses will be allowed extensive meals. Everyone else will be given food cubes for the duration of the gravity outage.

Your bed comes with an attachable pouch, so that you can sleep during the long gravity outage. Have your steward assemble the pouch for you days before the outage begins. After the outage begins, he will be dealing with emergencies (usually caused by those travelers who do not believe in following instructions) and will have no time for the niceties of setting up sleeping pouches.

III. Excursions

Most excursions will take you to approved human areas of various alien worlds. While many of you will tell the staff you are fully capable of behaving well unsupervised, do not leave the designated areas and follow the guidelines for each trip.

The aliens you meet in these designated areas will be accustomed to human contact. They will abide by our customs, provided you do not accidentally grab the wrong appendage when you are shaking "hands."

Aliens outside of these areas will follow their own customs. And while there are stories of passengers carried away by angry aliens, such tales simply are not true. These stories come from the land of the Buhgeye, tall green aliens with an appreciation of human beauty. Those passengers carried off, screaming, in a single tentacle, return much later, mollified and holding a flattering portrait of themselves.

IV. Returning Home

Once you have embarked on your adventure, you will not be able to return home until the designated date. Since you have signed documentation to such effect, no amount of begging or pleading or bribery will allow you to disembark at the nearest space station and make a return trip.

The ship has fine doctors, so health issues will be resolved on board. Medications and therapies will help those passengers who suffer from advanced space sickness, claustrophobia, and homesickness. Those passengers unable to withstand the rigors of space travel will spend the entire trip in our virtual reality unit, reliving stress-free moments from their past or adventures from stories provided by resident psychiatrists.

As the end of the journey nears, most passengers find themselves unwilling to leave the familiarity of their (now-comfortable) suite. Unfortunately, you must disembark upon arrival at our Earth port. We do provide a reacclimatization service that helps our passengers regain their "land legs" again.

To help reintegrate yourself into society, do not brag about your trip to your friends. Show them a few select highlights, but let them ask the questions.

Passengers who brag and, worse, those who embellish the details of their adventure, are the ones who become the source of the rumors you have heard about the discomforts of space travel. Spare future passengers the hyperbole, particularly if they plan to travel on an Interstellar Travel Company cruise ship in the future.

V. Further Information

Passengers who desire more information on various aspects of space travel should visit the gift shop. In addition to Amelia Pillar's *Etiquette for the Space Traveler*, passengers will find other illuminating titles, such as *Space Viruses and How to Avoid Them*, *Zero-G for Dummies*, and the ever-popular *Aliens: The Good, the Bad, and the Edible*. ○

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A HISTORY OF TERRAFORMING

Robert Reed

Although Robert Reed tells us he isn't really convinced that there will be a history of terraforming, he paints a vivid and convincing portrait of the sacrifices and triumphs that might take place over the next thousand years of one man's life. Bob is currently at work on his first YA novel. Like much of his fiction it will be a world mixing familiarity and strangeness, but this one will also have a dash of kids in peril.

Mars

Simon's father started talking about nuts on walls, about how the seeds he was working with looked very much like wall nuts. Then he winked, handing over the wonder that he had been carrying in his big palm. "What do you think of this, Simon?" But before the boy could answer, his father cautioned him to use both hands and be especially careful. "Not because you might damage the seed," the man said. "Or because it would ever hurt you. But certain objects are important, sometimes even sacred, and they deserve all the consideration and respect that we can possibly show for them."

Considering how small it was, the seed was exceptionally heavy. It was black and hard as diamond but covered with small, sharp-edged pits. Against his bare palms, the object felt warm. Maybe the heat was left over from where the seed was kept, or maybe it was warm in the same way that little boys were warm. Either answer might be true. He didn't ask. He just held the object in his cupped hands and stared, wondering what would happen if the impossible occurred, if the seed decided to awaken now.

For one person, time passed.

Then his father asked again, "What do you think, Simon?"

The boy's thoughts were shifting quickly, clinging to no single idea. He was telling himself that he wasn't even three years old. But on the Earth he would already be four, and every four-year-old that he knew enjoyed large, impressive opinions. But if he lived near Neptune, he wouldn't be a month old and his father would never take him riding along on his working trips. And if this were Mercury, then Simon would be many years old, and because of certain pernicious misunderstandings about calendars and the passage of time, he believed that on Mercury he would be an adult. He was remembering how people said that he was going to grow up tall and handsome. It was as if adults had the power to peer into the future. They didn't admit to children that they had this talent, but the truth often leaked out in careless words and unwanted

glimpses. Simon liked the idea of peering into the future. Right now, he was trying to imagine himself living in some important, unborn century. The nearly three-year-old boy wanted to be a grown man entrusted with some very important job. But for the time being, riding with his father seemed important enough. That's what he was thinking when he handed back that precious and very expensive seed, grinning as he said, "It's delicious, Dad." He had never been happier than he was just then.

"Do you know how it works?"

"Yes," the boy claimed.

"No, you don't," his father warned. "It's my job to find homes for these little buggers, and I barely understand them."

That admission of ignorance made a deep impression. Quietly, Simon asked, "What do floor nuts look like?"

Puzzled, his father blinked and said nothing.

Simon pointed at the seed. "I've never seen a wall look like that."

His father said, "Oh," and then softly laughed. "It's not two words. 'Walnut' is one word. It's the seed made by a species of Earth tree."

"I know what trees are," the boy boasted.

"You've seen the pictures, at least." His father turned away, setting the heavy black wonder back into its important drawer. Then as he walked to the front of the rover, he added, "Here's something else to think about: One of my seeds is quite a bit more complicated than any unborn tree. There's more information packed inside that hull than normal DNA can hold. And considerably more power than roots and leaves would ever show on their own."

Simon walked behind his father, looking through the wide windows. Mars was rocky and pale red, last night's frost hiding in the coldest shade. The ground couldn't have been rougher, yet the rover walked without rocking or lurching or jumping. High clouds and at least three mirrors looked down on them from the purple sky, and the skyhook known as Promise was straight ahead. Today the wind was blowing, moving hard enough to throw the smallest bits of dust. Dust was dangerous. The cold was dangerous. Mars liked to kill people, particularly careless children who didn't listen to their fathers and other wise voices.

But the world wouldn't be dangerous much longer, Simon thought.

For a long while, they rode toward Promise, but the slender tower didn't come any closer. Then the AI driver took them around the flank of a low hill and over the lip of a worn-out crater, and suddenly they were looking into a wide basin filled with brilliant water ice.

"Is this the lake?" Simon asked.

His father was busy reading two different screens.

This must be their goal, the boy decided. But he thought it was best not to interrupt, his father busy with something that could only be important.

He sat on the nearest chair, watching everything.

The rover walked down to the shoreline. Out on the ice stood a little tower and another rover, and somebody was moving slowly in one direction, then another. The stranger was wearing a big lifesuit, the kind used by people planning to be outside for a long time. Someday Simon wouldn't need a suit to walk in the open. Adults promised that in the future, he would be a tall, good-looking man and wear nothing but clothes and good shoes, and Mars would be the second Earth, but even better.

Simon would live for hundreds of years. Everybody said so. And that was even if he counted his birthdays in Martian years.

"This isn't right," his father muttered.

The boy stood up and eased close to his father.

With a sigh, the man said, "They shouldn't be here."

"Who shouldn't be?"

Father didn't answer. Opening a channel, he identified his employer before asking, "What's the hold up? You're supposed to be gone."

"Hey, John," said a woman's voice. "You're talking to Lilly."

Father's name was John. "No," he said quietly, but not softly. There was sharpness to that single tiny word. Then he sighed and reopened the channel, halfway smiling as he said, "I'm here with my son, Lilly."

She said nothing.

Simon touched his father's shoulder.

The man smiled at him and winked, and he was still smiling when he said, "I thought you went off on leave."

"Came back early," the woman said.

His father wasn't looking at either screen or what was ahead. He was still smiling, but something had changed about his face.

"How old is little Simon now?" the woman asked.

"Four." People born on the Earth used their old calendar. That was one reason Simon had trouble understanding what time meant.

"Where's his mother?"

"Waiting at home. It's just him and me."

There was a brief silence. Then the woman said, "Understood."

Father sat back. "Lilly? I was told your rig was going to be gone by now."

"I've had some lousy troubles, John."

The man's face looked patient but not happy. "Troubles?"

"Two bits went bad on me. I've had one bit get contaminated at the site before, but never two."

Their rover was walking on its crab legs, quickly marching across the frozen face of the lake. Simon imagined liquid water hiding under the thick white surface ice, and he thought of the cold mud beneath the water. Then he remembered the guppies he'd left at home with his mother and baby sister. Someday he would take those fish and their babies and set them free. Wouldn't that be a wonderful thing? In his mind, he saw the ice turn to warm water and the sky was blue like on Earth, and there were hundreds and millions of guppies swimming everywhere, all of their mouths begging for food.

"Are you close to finished?"

"Still drilling," the woman reported.

"How deep are you?"

"Five kilometers, nearly," she said.

His father mouthed one exceptionally bad word. Then with an angry tone, he said, "I'm sorry, Lilly."

"You can't wait one more day?"

"I've got my own schedule here."

The woman didn't respond.

After a minute, Father said, "I would, if I could. You know that. But they want me finishing this run in a week, and the kid has to get back."

Still, the woman didn't talk.

Father looked at Simon, preparing to tell him something.

But then Lilly's voice returned. "I just put in a call to the Zoo."

Father shook his head. Then softly and a little sadly, he said, "That won't do any good, and you know it."

"What are you talking about?" Simon asked.

Father closed the channel and said, "Shush," and then opened it again. "All right, Lilly. The Zoo can get their lawyers working. We're going to be official here. But why don't you start pulling your bit? If you win your delay, I'll let you put it back in and finish."

"So your boy's really there, is he?"

"Sure is."

She asked, "Can he hear me?"

"Why?" Father asked, reaching for a button.

Then all of a sudden, she said, "Hello, Simon. Hi! I'm your dad's very, very good friend, Lilly!"

There were rules about being alone. Alone inside a rover meant touching nothing except what belonged to him and what couldn't be avoided. The AI driver watched Simon when his father was absent, and it watched his father when he worked outside. If something bad happened, the driver would find some way to help. But Mars was dangerous, and the worst things were always ready to happen. Before they left on this journey, Simon's mother said exactly that to his father. "A seal fails, or you puncture your suit," she said. Mom thought her boy was asleep, and even if he wasn't, Simon couldn't hear her talking at the far end of the tiny apartment. With a quiet urgent voice, she reminded her husband that one misstep might leave their son half-orphaned and two hundred kilometers from home. And what would happen then?

"The driver knows what to do," his father had promised. "It sends out a distress call and starts walking toward the nearest settlement."

"With Simon inside," she said. "Terrified, and all by himself."

"No need to mention I'm dead," said his father. "Though that seems like the larger tragedy, if you ask me."

"I don't want the boy scarred," she said.

Father didn't respond.

"Scarred," she repeated. And then again, she said, "Scarred."

Simon didn't want to be scarred, but he was definitely worried. His father walked slowly across the frozen landscape, wearing a lifesuit whiter than the ice beneath his boots. His clean-shaven head showed through the back of the helmet. His father's friend stood beside her drill rig. Lilly was watching Simon at the window. A pair of small robots stood nearby, doing nothing. The drill was still digging, the clean bit clawing its way into the deep warm rock. Simon watched the cable twisting, and then he noticed his father waving a hand, and Lilly smiled at her friend and said words. Father turned, and Simon could see his mouth now. The adults were sharing a private channel, and both were talking at the same time. Then they quit talking. Several minutes passed where nothing was said. It felt like forever. Maybe they were waiting for something to happen. Maybe what would happen was something very bad. Simon remembered the story of a Zoo collector who cut into a cave filled with methane and water, and the foamy gas blew out of the hole and picked up one of his robots and flung it at him, killing him with the impact.

Just then, with chilling clarity, Simon understood that his father was about to die. Straightening his back, he made himself ready for the moment. Yet nothing happened. Nothing changed. The two adults resumed talking and then stopped talking, and Simon was desperately bored. So he dropped into the chair reserved for him, playing a game. He was the blue team; his enemies were purple. He started in one corner of the board, feeding and dividing and then spreading, and when he nudged against the purple blobs, he fought for position and the chance to make more blues.

When he stood again, his father was walking toward the rover. Simon had never seen anybody move that fast in a lifesuit. And Lilly had vanished. Where did she go? Then the airlock began to cycle, and Simon realized the woman was coming onboard. He put down his game and sat again, staring at the little door at the back end of the cabin.

Even after a thorough cleaning, the woman's suit smelled of peroxides and ancient

dust. She stepped into the cabin smiling, helmet tucked under one arm. The woman was pretty. She was darker than most of the people that he'd seen before. In the cabin air, her voice sounded warm and kind and special, and the first words she said to him were, "You look like a fine smart young man."

He liked this woman.

"Simon is a wonderful name," she said.

He nodded and smiled back at her.

"Your father's told me quite a lot about you," she offered. Then her face changed, and she said, "He's being very unreasonable, you know."

Once again, the airlock started through its cycle.

"Simon," she began. "Has anyone told you about the Zoo project?"

The boy nodded before he considered the question. But luckily, yes, he knew about the bug people. "My mom explained them to me."

Lilly said nothing.

"They're good-hearted soft souls," he continued.

Slowly, she said, "I guess we are," and then she added, "I'd like to believe we're doing something good. Saving what Martians we can save before their world is gone forever."

"Mars isn't leaving," he said.

"But their habitats will vanish. Some soon, and then the rest."

"But we're Martians too," he said, repeating what he'd heard from every other adult.

"Except the native microbes were first," she mentioned.

Simon shrugged, unsure how that mattered.

"They're under us right now," she began.

The airlock was pressurized, jets and determined vacuums struggling to clean his father's mostly clean suit.

"Beneath us is a wonderland, Simon. A paradise." Lilly's voice was quick and serious. "Heat and flowing water and nutrients, plus fractures in the bedrock that are prime growing surfaces for thousands of native species. Pseudoarchaea and nanobacteria, viral cysts and maybe the largest population of hunter-molds anywhere. What I'm sampling is the Martian equivalent of a tropical rainforest. It's a fabulous treasure, unique in the universe, and do you know what's going to happen to it?"

Some of her words made no sense. But one new word piqued his curiosity, which was why Simon asked, "What's a rain forest?"

Lilly hesitated. "What do you think it is?"

"Water falling on trees," he offered.

"That's it."

"Never stopping."

"It rains a lot, yes."

"That sounds awful," he offered.

Now the airlock stopped cleaning its contents, and the inner door popped open. Father entered the room quickly, his gloves unfastening his helmet, eyes big and his mouth clamped into a hard long line.

"We're talking about rain forests," Simon reported. Then to his new friend, he asked, "How can trees grow under falling water?"

"It isn't like that," she sputtered. Then she turned. "Hey, John. Hear back from the attorneys?"

"Not yet." Father stopped and with a slow voice asked his son, "What else have you talked about?"

"Nothing," Lilly said.

"The Zoo," corrected Simon.

"Yeah, the Zoo," she allowed. "I was just asking this fine young man what he knew about my work, and he reports that his mother says I'm soft but that I have a good heart."

Was that what he told her? Simon didn't think so.

Father looked at their faces, one and then the other.

"That's all," Lilly said cheerfully.

Father's suit was bright and clean. He looked hot, which made little sense. He even seemed tired, although they hadn't done anything today.

Finally, with a quiet little voice, he said, "Don't."

Simon couldn't tell which one of them he was talking to.

Or was he saying, "Don't," to himself?

But with a tight, almost angry voice, Lilly asked, "Why would I? Why would I even think that? I have this sterling good heart that doesn't wish ill on anybody, bacterial or otherwise."

Simon still liked Lilly, but adults could be very peculiar. Was Lilly one of those peculiar adults?

Neither adult wanted to talk, and they wouldn't look at each other. The floor seemed to be the most interesting area in the room, and they stared at it for a time, their mouths small and their eyes empty and both of them breathing quickly.

To break the silence, Simon announced, "I got to hold one of the seeds today. Dad let me do that."

Even then, nobody spoke.

"Seeds are machines," the boy reported. "They explode like bombs, and they're very powerful, and inside them? They've got these little sacks, and the sacks get flung out into the hole made by the bomb, and they're full of good young bugs that can do all sorts of neat, important things. Like growing fast and building these little, little roots that carry power like wires do, and the roots make it possible to heat up the crust fast and change the rocks to make our kinds of life happy."

Without warning, Lilly said one awful word.

Father set his hand on her suit, on the back of her shoulder.

"Don't touch me, John."

Then Father said, "Leave us alone, Lilly."

Four words, and none were loud. But Simon had never heard the man angrier than he sounded then.

"Suit up and go," he told the woman.

But Lilly just shook her head. Then putting on a big peculiar smile, she said, "Simon? Want to hear something funny about your father and me?"

The boy wanted any reason to laugh. "Sure."

"No," said Father, stepping between them. "Suit up and go do your work, Lilly. I'll tell my bosses something's wrong at my end, that I'm not ready to plant. Do what you need. Is that fair enough for you?"

She said, "No."

"What?"

Lilly kept watching Simon, the wild smile building on her pretty dark face. "I want you to help me, John. With the drilling, with the sampling. All of it."

Father didn't speak.

Then Lilly said, "Hey, Simon. You want your father to have a good heart, don't you?"

"Yes," he said.

"So what should he do? Help me or hurt me?"

"Help her, Dad," the boy begged. "You've got to, Dad. What else can you do?"

A little bird warned Simon about the impending rebellion.

Jackie was part African gray, with a good deal of genetic retooling and enough bio-linked circuitry to lift the parrot's IQ to vote-worthy levels. Her job functions included companionship and extra eyes with which to keep watch over the sprawling farm, and she was excellent at both duties. But every living thing possesses its unsuspected skills. Wasn't that what Simon's professors warned when they addressed each new class of would-be atoms? No matter how simple the genetics, an organism's mind, or the culture in which it was immersed, every created entity contained its fair share of surprises, flaws as well as those few talents that would, if they were too spectacular, screw up anyone's blooming career.

"Warning signs are marching," Jackie reported. "Small warnings, I'll grant you. But I can't shake the premonition of disasters on the loose."

"Is it our sun?" Simon asked. Which wasn't an unreasonable question, what with their reactor running past the prescribed 105 percent rating. "You think the light's about to fail?"

In twenty years, there had been two prolonged blackouts. Neither was Simon's fault, though both were major disasters for the farm—two incidents that left cancerous reprimands tucked inside his life-file.

But the parrot clucked at his concerns, saying, "No, it's not our sun."

"Meat troubles?" Viruses, he feared. A herpes strain hitching rides on the nervous systems of new immigrants, most likely.

"No, the ribs-and-hearts are growing well. And the bacon is ahead of schedule."

Nonetheless, Simon studied the terrain before them: The ancient crater was capped with a diamond dome, and fixed to the dome's apex was a blazing fire that winked out for only a few minutes each day. Otherwise the basin was flooded with a simple but brilliant light. Limiting the radiant frequencies allowed for the efficient consumption of energy. The black-green foliage stank of life, healthy and always growing. Tallest were the pond-pods—sprawling low-gravity trees endowed with countless trunks holding up bowl-shaped basins filled with clean water, each pond infested with shrimp and fish, each covered with thin living skins so that the jostling of wind and animals never spilled what lay inside. As a young man, Simon had helped design the first pond-pods, and since his arrival on Hektor, he had overseen countless improvements that allowed them to thrive in the carbonaceous soil. No accomplishment made him prouder. By contrast, the ribs-and-hearts and bacons were routine commercial species, ugly by any aesthetics he cared to invoke. There were long days when the master of this farm wished he could cull and enhance according to his own tastes, creating something more satisfying than an efficient but bland food factory.

Patiently but forcefully, he asked again, "What's wrong, Jackie?"

"Two humans were passing through," the bird reported. "They were keeping under the canopy but avoiding the main trails. I didn't recognize their faces, but they wore miner uniforms."

"What did the miners do? Steal food?"

"They did nothing," she said. "Nothing wrong, at least. But they didn't sound like miners."

Simon waited.

"They talked about fire."

"Tell me," he coaxed.

Against every stereotype, Jackie was an awful mimic. But she knew her limita-

tions and didn't try to reproduce either stranger's voice. Instead, she summarized. "One said something about being worried, and then the other said it was going to happen soon, in thirty-three hours. He told his companion that the dogs were sleeping and the fire was set, and even if the chiefs knew about the plan, at this point nobody could stop what couldn't be stopped."

"I don't understand any of that," Simon confessed.

"Why am I not surprised?" One of Jackie's unanticipated talents was for sarcasm. "At first, I wasn't bothered. But fire scares me and I thought that mentioning the chiefs was worrisome."

Simon agreed. In principle, every aspect of the colony was under their control, and if something was unknown to them—

"That's why I followed the miners," the bird volunteered.

"You said they weren't miners."

"Because they were strong. Two exceedingly muscular human beings."

Only soldiers and recent immigrants retained their muscle tone. Simon had a willow-boned shape that came from minimal gravity and limited calories. "What else did they say?"

"Except for one time, they didn't speak again," she said. "But just before leaving the farm, the man turned to the woman and told her to smile. He said that McKall knows what he's doing, and she should please damn well stop wasting her energy by imagining the worst."

Simon said nothing.

Then Jackie pointed out, "You know McKall, don't you?"

"I do," he admitted. "In fact, he's the atum who gave me this post."

Two dark reddish asteroids lay snug against each other, producing 624 Hektor. The little world orbited the Sun sixty degrees ahead of Jupiter, in that sweet Lagrange zone where a multitude of Trojan asteroids had swum for billions of years. Hektor was an elongated body spinning once in less than seven hours, and Simon had always believed that it was an ugly world. It didn't help his opinion that he was living on the fringe of settled space, serving the chiefs and various corporations as little more than a farmer. In school, his test scores were always ample; he graduated as a qualified, perhaps even gifted atum—the professional name borrowed from the Egyptian god whose task it was to finish the unfinished worlds. But good minds only took their bodies so far. More coveted posts were earned through useful friendships and powerful mentors, and Simon's career to date proved that he had neither. Anywhere else in the Solar System would have been a happier fate: Mars was a dream, and the Sunward asteroids and the moons of Jupiter were busy, important realms. Plus there was Luna now, and preliminary teams were plotting the terraforming of Venus. In contrast, Hektor was an isolated mining station, and not even a complete station at that. Once its facilities were finished, it would supply water and pure carbon to the inner system. But it was never intended to become an important destination, much less a site of major colonization. Barely fifty thousand intelligent souls lived on and inside its gloomy body, and the humans were a minority, most of them deemed also-rans and lost souls.

The main settlement had an official name, but locals referred to it as Crashtown—a grimy dense chaotic young city resting on the impact zone where two D-class asteroids were joined together. Riding beside a load of freshly harvested bananas and boneless minnows, Simon rode down to Crashtown. But he wasn't sure of his intentions, his mind changing again and again. Then the police robot suddenly asked for his destination.

"The home of Earnest McKall," Simon heard himself reply.

But that wasn't good enough. For no obvious reason, security protocols had been heightened. The robot haughtily demanded to know a purpose for this alleged visit.

"I found his lost dog," the young atum declared.

No dog was present, but the answer seemed to satisfy. Simon continued kicking his way into an exclusive tunnel, past robust gardens basking under Earth-bright lights, endless arrays of flowers and cultured animal flesh repaying their considerable energy by making rainbow colors and elaborate perfumes.

"What if McKall isn't at home?" Simon asked himself.

But he was, and the much older atum seemed pleased to find this unexpected guest waiting at his front door. "Come in, my boy. I was just about to enjoy an evening drink."

"I don't want to bother you," Simon lied.

"No bother at all. Come in here!" McKall had always been a bony person. Simon once found a ninety-year-old image of him—a lean, shaggy boy of eight, bright eyes staring at the camera while the mouth looked smug and a little too full, as if he had just eaten something that wasn't proper food. The grown-up version of that boy retained his youthful air, but the hair was a second or third crop, and it had come in thin and amazingly black. Most of McKall's life had been spent on tiny worlds, and the lack of gravity along with a Methuselan diet had maintained the scrawny elegance of that lost child.

"Wine?" McKall offered.

"Thank you, no," Simon responded.

The chief atum on Hector stood beside an elaborate bar—a structure trimmed with rare metals, in the middle of a huge room designed for nothing but entertaining. Yet he hadn't bothered reaching for empty bottles, much less filling them. What he was doing was staring at Simon, and smiling, and something about that look and the silence told the guest that his presence was not unanticipated.

"My dog, is it?" asked McKall.

Simon flinched.

The smile sharpened. The man kicked closer, his voice flat and smooth and decidedly unrushed. "What do you know, my boy?"

Simon was nearly fifty, his own boyhood beyond reach.

"Hear some news, did you?"

"About dogs," he reported.

McKall shrugged. "And what else?"

"Something is going to happen."

"Happenings are inevitable. Do you have specifics?"

"Twenty-eight hours from now—"

"Stop." A small hand lifted, not quite touching Simon on the chest. "No, you know nothing. Absolutely nothing."

"Your dogs are sleeping," Simon continued.

His host refused to speak. Waiting.

"And there's something about a fire, too."

The smile shrank, but the voice was friendlier. Curious. Perhaps even amused. "What about fire?"

"I've studied your writings, sir." Habit forced Simon to nod slightly, admitting his lower status. "You like to equate metabolic activity with fire."

"I'm not the only voice to use that allusion."

"But as a young atum, you spent a great deal of time and energy complaining about the limits to our work. Every atum is shackled by draconian laws, you claimed. You said that life as we made it was just a smoldering flame. Your hope was to unleash the powers of the organic. Novel biochemistries, unique genetics, and ultraeffi-

cient scavenging the dead and spent. You were one of the loudest advocates of suspending the outmoded Guidelines, and only then would our young profession be able to produce a firestorm of life that would run wild across the universe."

"I see." McKall laughed quietly. Then, again, he said, "I see."

"What can't the chiefs stop?"

Instead of answering the question, the atum posed his own. "Why do you believe that a skilled researcher—a man with major accomplishments—willingly came to this very remote place? Why would Earnest McKall ignore every lucrative offer, traveling all the way out here to this little chunk of trash and ice water?"

Simon said nothing.

"There are dogs," McKall admitted. "Soon to be awakened, in fact. Decades of research and a series of camouflaged laboratories have produced more than a few revolutions, both in terms of productivity and plasticity."

"You did this?"

"Not alone." The atum shook his head, the rich black hair waving in the air. "I have a dozen brilliant associates working beside me, plus collaborators on twenty other worlds. Yes, I have a fine confident mind, but I'm not crazy with pride."

"You are not, no. I would have included you, young man. In fact, that's why I steered several likely employers away from your class's hatch. I believed I could use your talents out here with me."

"But I haven't done anything."

"Nothing at all," McKall agreed. "Which was a surprise for me, I'll admit. After your arrival, I kept careful watch over your work, and in particular, how you responded to authority. Honestly, I wasn't impressed. I need boldness, genius. Competency without inspiration is fine for the commercial world, but not for souls dreaming the big dream."

If Simon had been slapped, his face wouldn't have felt warmer. He breathed heavily and slowly, and then despite every reserve of self-control, he began to weep, tears scattering from his reddened cheeks.

"But I like you anyway," McKall continued. "And since you have no specific knowledge about my plans, and there's no way to stop what is soon to begin, I will give you a gift. Use this chance to slip away. A transport leaves Hektor in four hours. There will be empty berths, and I advise that you take one."

Simon turned as if to leave, then hesitated.

"You plan to take control over Hektor?" he muttered.

McKall laughed. "Haven't you been paying attention? My goals are far more ambitious than this two-headed rock!"

Expecting to be stopped—by restraining hands or murderous weapons—Simon nonetheless hurried to Crashtown's civil house. The highest-ranking chief seemed to be waiting for his arrival. He shook both of Simon's hands and ushered him into a tiny office, and before Simon could speak, the chief told him, "Don't worry. And certainly don't panic. We know all about their plans."

"You do? For how long?"

"Days now." The chief shrugged. Feigning confidence, he reported, "We have McKall in sight, plus all of his lieutenants. And our security teams are minutes away from taking out both of his private labs."

"Good," Simon offered.

And that was when the chief quit smiling. Turning grim, he said to the farmer, "But I am curious: Why did you go to the atum's home before coming to us?"

"I didn't know anything," Simon said.

"You were fishing for information?"

With as much conviction as he could manage, he said, "Yes. If I was going to report a crime that hadn't happened, I needed details. Some reason for you to believe me." "A good enough answer," the chief replied. "At least for the moment."

Simon felt cold and weak. What mattered to him now was returning to his farm, to Jackie, and provided this trouble vanished, he would again take up his pivotal role in feeding this very small world. He was practically shaking with worries. "May I leave?" he risked asking.

"Until we know for certain, you cannot."

Simon swallowed. "Until you know what for certain?"

That brought a tiny laugh, and then the ominous words, "Everything, of course. Everything."

The attacks on the laboratories were launched, each blundering into carefully laid traps. McKall's mercenaries were ready, and the parallel attempt to capture the ring-leaders ended up netting nothing but holo images and robotic mimics. Then the rebels took over the local com-system. Their own attack would proceed on schedule, and simple decency demanded fair warning to civilians and the opportunity to escape by any means available. But the chiefs banned all travel. They quickly gathered their remaining forces, generating new plans up until that moment when the rumored "dogs" appeared. Secret tunnels reached deep inside Hektor's smaller half, and out of them came hot-blooded monsters moving as blurs, eating flesh and laser bolts as they ran wild through Crashtown.

The ensuing chaos allowed Simon to escape. At the farm, he discovered three civil robots quickly setting up a small fusion bomb. "We cannot leave this resource for the enemy," one machine reported. Simon didn't care anymore. He collected Jackie and a few possessions before racing to the auxiliary port, and while the ground beneath him shook and split open, thousands of panicked souls abandoned Hektor, riding whatever was marginally spaceworthy, accepting any risk to take the long fall back toward the sun.

For the next several weeks, Simon was interrogated by a string of distant voices—military minds and politicians who wanted any and all glimpses into McKall's nature.

Simon offered what insights he had, trying to steer clear of his own considerable embarrassment.

Once Simon's transport passed into Martian orbit, the refugees were herded into quarantine on New Phobos. Who knew what new diseases MaKall could have slipped into their blood? Between the tests and more interviews, his childhood world teased Simon with glimpses of its cold blue seas and dense, mostly artificial atmosphere. The harsh desert landscape had vanished, the world's rapid transformation producing feelings of pride and sorrowful loss. But despite all of the brilliant plans and the trillions of invested euros, the terraforming process was far from perfect. From forty thousand kilometers high, Simon identified lakes where the acids still ruled and forests of withering trees, and there were rumors that the new ecosystem was proving far less stable than the public voices liked to proclaim.

Fifteen months later, Simon was free of quarantine, and he watched the updates as a fleet of powerful military vessels assaulted 624 Hektor. Robots and shock troops landed in the empty crater that had been Simon's farm. The fearsome dogs were melted and frozen. Every battle was won; victory was in hand. But then the war took an abrupt, unexpected turn. A blue-white blast tore through the asteroid. Since the rebellion, the smaller portion of Hektor had been thoroughly transformed. A transport ship of unprecedented size was hiding inside the reddish crust, and the explosion flung away great chunks of its companion while slaughtering the invaders. Half

of the asteroid dropped out of its ancient orbit, crude engines firing, maintaining a near-collision course with Jupiter. Momentum was stolen away from the giant planet. Then, uncontested, the ship pushed into the outer Solar System, swinging close enough to Saturn to enjoy an even larger kick.

Five years later, an improved set of star engines came to life. By then, McKall's plans were common knowledge. No one was planning to chase after him, much less continue the war. What would be the point? A forever-changing, increasingly strange body of organized carbon and silicon and fusion-heated water was streaking away from the Sun, away from humanity, aiming this newborn revolution straight for the three Centauri sisters.

Venus

Eventually Simon's personal history became public knowledge. Strangers suddenly knew his name, and they would smile at him in that special sad way people used in uncomfortable circumstances. Acquaintances began to treat him as if he were important, laughing easily at his rare jokes, wishing him a good day or good evening or sweet, delightful dreams. His workmates, the fellow atums, embraced one of two inadequate strategies: Either they were quick to tell him how sorry they were and then ask if they could do anything, anything at all, or they seemed to take offense that Simon hadn't confided in them before now. "Dear god, you lost most of your family," one man exclaimed incorrectly, but with passion. "I wish I'd known. I look like the fool. I thought we were friends, at least . . ."

Simon did have a few scattered friends, and they knew better. When he didn't mention the unfolding disaster on Mars, they patiently respected his privacy. As the situation worsened, he sought out mood-leveling drugs and other cheats that allowed him to manage, if only barely. He cried, but only when he was alone. During the worst days, he volunteered for solitary assignments, carefully avoiding professional chatter about past mistakes and the mounting casualties. He thought he was succeeding, taking a grim pride in his talent for enduring these personal trials, but afterward, when the situation had finally stabilized, he crossed paths with an acquaintance from childhood. Ignorant as a bug, the fellow asked, "What about your family, Simon? They got out of that nightmare in time, didn't they?"

His parents never tried to escape. They were two old people living at opposite ends of an unfinished, critically flawed world, and they hadn't spoken to one another in nearly forty years. But as the blizzards struck and the air turned to poison, they left their homes, riding and then marching through the chaos and slaughter, finally reaching an isolated habitat overlooking Hellas where they lived together for their final eight days and nights.

As for Simon's sister and various half-siblings, all but two escaped before the ecosystem collapsed. But where they would live tomorrow was an endless problem, for them and for the Solar System at large. Millions of refugees were crammed onboard the ten New Moons and a fleet of rescue ships, plus various ad hoc habitats contrived out of inflated bladders and outmoded life support systems. It was a tough, dirty, and problematic life, though far superior to being one of the fifty million bodies left behind on the anaerobic, peroxide-laced surface of Mars. Where would these souls live tomorrow? Faced with this conundrum, the atums had a ready solution: Terraform Mars all over again, and do it as quickly as possible, but use every trick in their rapidly evolving arsenal.

"This time, we'll build a conservatory," one young atum declared. "That's how it

should have been done in the first place. And again, Simon, I'm so very sorry for your tragedies."

Naomi was a pretty youngster who used her beauty and a charming, obvious manner to win favors and fish for compliments. She liked to talk. She loved listening to her own smart, insistent voice. Rumor had it that her body was equipped with artificial openings and deployable prods, leaking intoxicating scents and wondrous doses of electricity. Simon was curious about her body, but he didn't have the rank or adequate desire to pursue his base urges. Watching one of Naomi's performances was as close as he wanted to be. Most of his colleagues felt threatened by her promise. But even when the girl spoke boldly about her incandescent future, Simon couldn't take offense. His second century had brought with it a tidy and quite useful epiphany: Everyone would eventually fail, and if their failures were long-built, then the subsequent collapses would be all the more dramatic.

At this particular moment, the atums were chanting the usual praises about conservatories.

"Oh, I'm not convinced," said Simon quietly.

Naomi laughed, and with a patronizing tone asked, "Oh my, why not?"

"A roof wouldn't have helped. In the end, nothing would have changed."

She couldn't let that statement go unchallenged. "But if we'd had a lid over the sky, we'd have controlled the weather more effectively. The sunlight, the upper atmosphere's chemistry. All the inflows would have belonged to us."

"But not four and half billion years of geologic habit," he countered.

"Geologic habit," she muttered, as if she couldn't quite understand the phrase.

That's when the chief atum interjected her presence into the conversation. With a loud breezy voice, she summarized both positions. Then after putting her own opinion into jargon-laded terms, she added, "Too much of the Mars business depended on biological means. That's where they went wrong. Don't trust life; it doesn't care about you. The physical realm is what matters, and conservatories are wonderful tools. They're sure to be the last word in our business."

Every face but one nodded, the matter settled.

Yet despite all of this polished certainty, only one world-encompassing conservatory was close to being finished, and that was a special circumstance. Luna was the easiest world to enclose inside a semi-transparent bubble: The low gravity, the proximity of Earth, thriving local industries, and the absence of weather and political troubles. Its roof would hold any new atmosphere close. Double panes of diamond, transparent and strengthened with nanofibers, would keep space at bay. The engineering was straightforward, and construction should be relatively easy. But "should be" often proved illusionary. The Luna project was already 40 percent over-budget, the critical water from asteroids and comets was being chased by other terraforming projects, including Venus, and even the most favorable scenario warned that twenty more years would pass before the first soft winds of an oxygen-neon atmosphere began to blow across the dusty plains of Nearside.

Simon's doubts could be misplaced. Indeed, he hoped he was wrong. But still, this one-time Martian was suffering a nagging yet familiar sense of standing at the brink of another precipice.

The other atums had happily left Simon behind. The topic of the moment, and the passion of their professional lives, was Venus. Small projects were being discussed. Most of their work involved the atmosphere and heat dissipation, the obvious solutions offered and debated and then rejected, soon to be replaced with other equally satisfactory answers. When he bothered to listen, Simon could tell who was sleeping with Naomi and who was maneuvering to take their place. It would have been funny, if not for the grave consequences lashed to animal lust. He didn't believe in Great

Deities, but if the gods were watching, they would surely laugh to see how tiny hormones and glands smaller than hands could manipulate the future of entire planets.

Presiding over this working lunch was the chief atum for the Third District, High Atmosphere and Future Climate Department. She was ten years Simon's junior but much more successful, and when she spoke, the room fell silent. Though that didn't mean people were listening. This group wasn't large or diverse, but within its ranks were enough opinions and rampant ego that no authority could rule, much less orchestrate the thoughts of so many well-trained, singularly focused minds.

Venus was the topic, but the planet existed only as numbers and one staggeringly complicated model. Except for the tug of gravity and the specifics in the numbers, this could have been any meeting of atums sitting inside any windowless room, on Luna or Callisto or Pallas, or any other portion of the Solar System being relentlessly and utterly transformed.

When the official business was finished, at last, the chief looked longingly at Naomi. "Good job, and thank you," she told everybody.

Everybody wanted out of the room.

But without warning, the chief said Simon's full name and caught his eyes, not quite smiling when she said, "You have a new assignment. For the time being, you're off the hydrological team."

A colleague must have accused him of being difficult or incompetent, or perhaps both. It had happened before. He might be a 128-year-old man, but he always felt like a little boy when he was embarrassed or shamed.

Except that nothing was wrong, at least on this occasion. The chief smiled, admitting, "It's because we have a visitor coming. A representative from . . ." She hesitated. "From the Zoo Project."

"Another collection mission?" Simon inquired.

"Oh, these darlings always have another mission," the chief complained.

Simon nodded, waiting.

"I need you to help with her hunting and keep tabs on whatever she finds." The chief stared at him, smiling suspiciously. "Do you know a woman named Lilly?"

Too quickly, Simon said, "No."

"That's odd," the chief mentioned. "She requested you by name."

There were myriad routes to achieving a long healthy lifespan. Simon preferred small measures left invisible to the naked, unmodified eye. But the woman beside him wasn't motivated by tradition. Native flesh would always be perishable, and the cosmetically proper synthetics were usually too fragile to last more than a few years. What proved most durable were colonies of engineered microbes, metabolically efficient and quick to repair themselves—a multitude of bacteria infusing the perpetually new skin with sensitive, highly adaptable neural connections. These were popular tools among the very young and the determined elderly. Yet Simon couldn't remember ever meeting anyone who had endowed herself with such a vibrant, elaborate exterior.

"I'm sorry," the very colorful woman began.

Just why she was sorry, Simon didn't know. But he nodded politely, resisting the urge to ask.

For the next few minutes, they sat in silence. The sky-driver continued on its programmed course, little to see and nothing to do for the present. Most of the world's air lay beneath them. The sun was low on their left, the only inhabitant of the nearly black sky, slowly descending toward its retrograde setting. The conservatory was a grayish-green plain far below them, absolutely smooth and comfortingly bland. Venus was not Luna, and this project was far more complicated than erecting a high roof above a compliant vacuum. Only limited sections had been completed—barely 9

percent of the eventual goal—and even that portion was little more than the scaffolding meant to support arrays of solar-power facilities and filters and spaceports and cities of robots that would do nothing but repair and improve this gigantic example of artless architecture. Was his guest full of questions? Most visitors wanted to hear about the nano-towers rooted in the rigid Venusian crust, holding these expensive gigatons far above the dense, dangerous atmosphere. People might know the facts, but it soothed them to learn about the marvelous engineering. Everyone was the center of his own important story. Everybody secretly feared that if some piece of the conservatory failed, it would happen beneath his own important, tragically mortal feet.

At last, the silence ended. Lilly touched Simon for the first time. Hot orange fingertips brushed against his forearm. “I am sorry,” she said again. “He was a good father, I know. I’m sure you miss him terribly.”

Simon’s reaction surprised both of them. Turning toward the gaudy woman, he remarked sharply, “My mother was the good parent. Dad spent his life collecting lovers, and I didn’t like his girls at all.”

The violet face was bright and hot, full of fluids more complicated than blood. Perhaps the woman was insulted. Maybe she wanted to turn the sky-driver back, ready to exchange this atum for one less difficult. But nothing about her seemed hurt or even surprised. She smiled for a few moments. Saying nothing, she let her glassy dark eyes absorb everything about the old man beside her. Then her hand gripped his wrist, a wave of heat threatening to burn his pale, dry skin.

“Nonetheless, I’m sorry,” she said.

Simon pulled his arm back.

“I didn’t treat either of you fairly. At the lake . . . when I was drilling . . . all I cared about was saving the natives, by whatever means. . . .”

Here was the central problem, Simon realized. It wasn’t that this woman and his father had an affair, or even that they might have loved one another. What rankled was that she had willfully used him as a tool.

“How are the Martians?” he inquired.

“Happily sleeping inside a thousand scattered laboratories.”

“That’s sad,” he thought aloud.

“Really? Why?”

“Life should be busy,” Simon proposed. “Not hibernating inside common freezers.”

Now Lilly took offense. She said nothing, but her back stiffened and she maintained her silence until it was obvious that she didn’t accept any complaints about her life’s work. They were approaching their destination. As the sky-driver began its descent, Simon risked mentioning, “I’m probably mistaken. But I thought the Zoo already grabbed up every species of air-plankton.”

The native Venusians had had a robust ecosystem, but compared even to Martians, they were an uncomplicated lot.

“We have every native in bottles,” she said stiffly, nursing her wounds.

“And the native populations have crashed here,” he pointed out. “No light gets through, except for some infrared, and the sulfuric clouds are dispersed and too cold by a long measure.”

“True enough,” she agreed.

Then she touched herself, her face growing brighter as it warmed with enthusiasm. “But new species are evolving every day, and isn’t that exciting news?”

It was boring news, but a truce had been declared. The old man and even older woman stopped mentioning their differences and histories. They were professionals, each quietly pursuing a quick and narrow mission. The sky-driver set down and linked up with a large dome filled with sleeping machines and assorted elevators.

Donning lifesuits, they boarded a small elevator and descended ten kilometers. Simon watched Venus through the monitors. Lilly busied herself by readying a suitcase-sized apparatus that would inhale and filter the carbon-dioxide atmosphere, pulling every viable microbe from the mayhem of dust and industrial pollution. The nano-tower was more air than structure—hexagons of webs and sturdy legs, each side nearly a kilometer in length, its feet firmly planted on the slopes of Aphrodite Terra. Their final destination was a platform intended as a hive for robots waiting to repair what was rarely damaged. There was no visible light, but there was wind and a stubborn atmosphere still centuries away from collapsing into a newborn ocean of soda water. Obviously Lilly had done similar work on other towers. She moved with purpose. Her machine walked next to her, waiting patiently as she investigated one site and then another. Experience or perhaps intuition allowed her to decide where the best results would be found. Then she told the machine, "Deploy," and it gladly grabbed the railing with three arms and flung its body over the edge, exploding into a purposeful tangle of ribbons and funnels and other twisting shapes.

"How long?" Simon asked.

"Do we wait?" She looked up at him, her features illuminated by the backscattered light from her helmet. "An hour, at least. Maybe longer."

Venus lay before them, vast and bathed in darkness.

"What kinds of creatures are out here?"

"Chemoautotrophes, naturally." Staring out into the same night, she explained, "The UV photosynthesizers are still here, of course. They like to find crevices in our towers, places where they can sleep, probably waiting for our roof to collapse."

He let that anthropomorphism go unchallenged.

"These natives are odd, adaptable species, all descended from plankton in the boiled-away seas. It's astonishing what they've kept inside their very peculiar DNA. Today, some of them are utilizing industrial solvents and lost nano products. Where there's heat, energy can be harvested." She turned, showing her face again. "There's no reason to worry yet, and maybe never. But a few of these bugs have found ways to creep inside our robots, using them as shelters. If one of them ever learns how to steal an electrical current, everything changes. Probably in a matter of a month or two."

"That quickly?"

"Venusians are fertile and promiscuous. With these winds, a successful strain can be everywhere in days."

Simon had never studied the beasts. Would it pay to invest an hour a week in digesting the existing literature?

"But odds are, that won't happen," his companion allowed. "I do love these little things. But life, even at its most spectacular, has limits."

"It does have limits," he said tactfully.

Lilly's face was pretty and never more human—a consequence of the indirect light washing across their features, and their solitude, and Simon's nagging, seemingly eternal sense of loneliness in a universe filled with an increasingly strange humanity.

"Does it ever bother you?" she asked.

He waited for the rest of the question.

"Terraforming is a horribly destructive act," Lilly stated. "Obliterating one order for another. Or in the sad case of Mars, destroying a quiet and stable world to replace it with a doomed weakling . . . and then after all of that inflicted misery, not learning enough to give up the fight."

"It isn't meant to be a fight," he declared.

But of course it was. Perhaps never so clearly, Simon realized that they were standing on the ramparts of a great fortress, an endless war waging around them. He listened to the wind and felt it push against him, and he took pleasure from his

heart hammering away inside a chest that would never feel ancient. And then he was smiling, realizing that even a quiet disappointment of a soul—the sort of person that Simon was—could take a keen, unembarrassed pleasure from the battles that he had helped win, small and otherwise.

Iapetus

“I know you worry. I worry too, Simon. Neither of us is strong at politics, and even if I were a marvel at making alliances and handling cross-purposed personalities, this would be a difficult place. This Earth would be. But as knowing voices say, and with good reason, ‘There’s only one Stanford.’ Perhaps the Farside Academy is its equal, at least when it comes to creating prominent astronomers. But Stanford still ranks first in my field, and it has for half a millennium, and my degree will get me noticed by wise entities and doubting coworkers at all ends of the Solar System. And since I’m not gifted at winning admirers through my simple charm, being in this university will help me quite a lot.”

Simon paused the transmission—this wasn’t his first viewing—and spent the next several minutes studying the face that filled the screen. What had changed? The mouth, the bright yellow eyes. That artful crest of green feathers—a jaunty hat in appearance, and one of Jackie’s last obvious links to the world of her ancestors. No, she looked exactly the same. To casual eyes, she might be some species of human, her genetics modified for the most normal of reasons. She wasn’t much larger than when he had first met the parrot, which put her well inside the restrictions imposed on visiting students. The bio-taxing laws were perfectly reasonable; Earth had always been too crowded. Even six hundred years ago, when Simon was a scrawny Martian with dust in his breath, the home world had suffered from too many bodies standing on too little land, farms working hard to make food for a population that wouldn’t age, and in most cases, stubbornly refused to die. Immortality was the norm everywhere, and who didn’t want children to share the bliss? That’s why bodies and minds continued to grow smaller and smaller, cheating the restrictions of nature by shrewdly redefining the rules.

In appearance, the Earth hadn’t changed Jackie. Perhaps her voice was a little too formal, too staged, but cameras always made her self-conscious. He knew this creature well enough to know she wasn’t holding anything back. One fib today, he feared, and that would be the end. They had barely begun their long separation, and here she was, making time to call home. Simon assured himself that no conspiracy of ambition or seduction would steal away the love that had taken him by surprise, one patient century at a time.

Again, he let the message run. Jackie listed classes and spoke about the tiny quarters she shared with three other happy graduate students, and she mentioned that the stars came out on clear nights, but of course they were illusions. Earth’s conservatory was finished two hundred years ago—a marvelous semi-permeable membrane that strictly controlled what fell from above and what slipped away into the cosmos. Today, the mother world was a rigorously controlled room where a trillion sentient entities lived on and inside the old continents and throughout the watery reaches. It was a beautiful world, still and all. But it was a decidedly alien realm, forever changing, and some corners of that room were famous for criminal mischief and random psychopathic rage.

Yes, he was worried.

Absolutely, Simon wished Jackie had stayed with him after her sudden change of

careers. Saturn's major moons had quality universities, and even noble, haughty Stanford offered virtual classes to anyone with money. Why not accept a longer, safer path to her degree? Time wasn't in short supply, Simon had argued. And by staying where they were, Jackie would have remained immune to the hazards of so many close-packed souls.

The transmission continued. "I'm sure you know this," Jackie said. "I've probably told you this before. But did you realize there isn't one working telescope on the entire campus? We have a facility forty kilometers above us, perched on the conservatory roof, but it's filled with museum pieces and curious tourists." She was thrilled, her flexible mouth giving each word an accent that was purely hers. "Stanford's telescopes—my telescopes—are everywhere but on the bright busy Earth. Luna and the Jovian Trojans, and there's a beautiful new mirror that just came on line in Neptune's Lagrange. And because I'm here, that's my mirror. It's my best eye. Think of the honor! If I was at home with you, I'd be little more than a technician pointing these machines at targets that only the true Stanford students would be allowed to see."

Yes, she made the right decision. Simon had always known it, though these little mental exercises helped convince him again.

What a silly little ape he was.

"But I didn't tell you this incredible news," Jackie said in conclusion. "I just found out. Long, long ago, Stanford had a mascot, and it was a bird! Can you imagine the odds?"

Simon froze the image and kissed the lips. Then he filed the transmission in places guaranteed to be safe for an eternity, and feeling weepy, he went on with his comfortably busy day.

Even orbiting Saturn, where space was cheap and food easy to come by, people were acquiring small modern bodies. Simon hadn't been this tiny since he was one year old. These new metabolisms were efficient and reliable, and where the human mind would eventually decay, cortexes made of crystalline proteins were denser and far sturdier, thoughts washing through them quickly enough to double an atom's natural talents and increase his memory twenty-fold.

But every atom underwent similar transformations, which meant that when it came to his professional life, remarkably little had changed. Simon and his colleagues had kept their old ranks and ratings, only with greater responsibilities and larger workloads. A significant medical investment had changed very little. "Treading water," he dubbed his job—a weak play on words, since what he did was manage the nutrient flows in the newborn sea. But really, he had no compelling reason to complain, and in any given year, he didn't waste more than a moment or two wondering what other course his life might have run, if only.

He was a quietly happy soul.

And despite few promotions or pay increases, his work had challenges as well as moments of total, child-like joy.

Pieces of Iapetus now belonged to Luna and Venus. But those decades of throwing water ice and hydrocarbons sunward were finished. The original mining camps had evolved into cities. Multitudes lived on Titan and Rhea and the other moons, and nobody was in the mood to share their wealth. Luna would remain a damp stony sponge, while Venus was a clean dry world, its ecology being redesigned to endure the boundless drought, its citizens more machine than meat. No matter how stupid or stubborn recent governments had been, the mathematics were brutally simple: From this point forward, it would be easier to terraform each world where it already danced, just as it was far cheaper to ship extra humans and other sentients out to these empty new homes.

Light washed through the new Iapetus, and the water was warm and salted, and

the neutral-buoyant reefs were magnificent structures of calcium and silica wrapped around bubbles of hydrogen gas. The ancient moon had been melted, from its crust to the core, and great pumps were churning up that single round ocean, producing carefully designed currents meant to keep every liter oxygenated and illuminated by the submerged suns. Trillions of watts of power made the little world glow from within. Larger than the oceans of the original Earth, but without the dark cold depths where life had to putter and save itself on hopes of a scrap of food, his home would eventually become jammed with coral forests and bubble cities and fish suitable for a garden, lovely and delicious to any tongue.

Nutrients were Simon's boring, absolutely essential expertise. When he wasn't dreaming of Jackie, he would dream about the day's conversations with sensors and AI watchers, the home-mind and various colleagues scattered across other, more highbrow departments. Only a tiny fraction of moon was settled. A few floating cities on the surface, and there was an industrial complex digesting and dispersing the tiny core of stone and metal impurities. But what this atom needed to do, at least in his tiny realm, was create a cycle of nutrients that would ignore disruptions and random shifts in current, leaving all of the water as bright and clear as the finest tidal pool on some long-vanished earthly beach.

Because she was interested, Simon ended his days with updates to his lover. Every evening, as the nearest sun began to dim, he would craft a little message laid down on cool, bloodless data. But because he was nervous, he inevitably confessed that he was thinking of her constantly and that he loved her, his face and tone saying what he didn't allow from his words: That he was scared to lose her to some student of promise, or worse, a professor of certified genius who would sweep his darling bird off to realms far more exotic than his beautiful but quite tiny pond.

The message began with news from Earth. With a quick joyful voice, Jackie talked about classes and the lab that she was teaching solo—"I'm so terrified, and the students love it when I shake"—and she twice mentioned rumors about a mild plague tearing through some of the coastal algae farms. "There's talk about shortfalls," she admitted. "Since they run their ecosystem with minimal reserves, shortages are inevitable. Too many citizens, plus all those others who slipped in unnoticed." Then guessing he would be frightened, she added, "Oh, it isn't serious. Everybody's just going to have to go a mouthful or two short at dinner. And Stanford has its own emergency supplies, so it's nothing. Nothing at all." Then she grinned with her lovely toothless mouth, and showing nothing but delight, she announced, "I have something to show you, darling. By the way."

And with that, her face froze and her voice stopped long enough that Simon began troubleshooting his equipment.

But she moved again, speaking with a quiet, conspiratorial tone. "Nobody sees me, darling. 'Nobody' meaning everybody else. You didn't know my little secret, but I seeded our home-mind with some elaborate security protocols. Not as good as some, but strong enough to keep away prying eyes."

"Prying at what?" he muttered.

Jackie's message was enormous, and it included interactive functions. The program heard him, and with Jackie's voice it said, "Soon enough, darling. You'll see. But let me show you a few other marvels first. All right?"

He nodded happily, a sense of adventure lending the moment its fresh, welcome edge.

Jackie continued. "You've seen these places. But I can't remember when, and the new mirrors are so much more powerful. I'm including portraits of five hundred thousand worlds, each one supporting life."

Except for their clarity, the pictures were familiar. Life was a relatively common

trick performed by the galaxy. Sophisticated, Earth-like biospheres did happen on occasion, but not often and not where they were expected to arise. By and large, the normal shape of life was tiny and bacterial. Mars and Venus, the European seas and the vivid clouds of Jupiter were typical examples. By contrast, multicellular life was an exceptionally frail experiment. Asteroid impacts and supernovae and the distant collisions of neutron stars happened with an appalling frequency, annihilating everything with a head and tail. Only the slow-living slime at the bottom of a deep sea would survive, or the patient cold bug ten kilometers beneath some poisoned landscape. At the end of the Permian, the Earth itself barely escaped that fate. But even accounting for those grand disasters, the Earth-equivalents proved a thousand times too scarce. Jackie's once-young professors had a puzzle to play with, and their answer was as sobering as anything born from science.

Now and again, interstellar clouds and doomed suns would fall into the galaxy's core. If the inflow were large enough, the massive black hole responded with a kind of blazing horror that effectively ended fancy life almost everywhere. Since the Cambrian, the galaxy had detonated at least three times, and the fortunate Earth had survived only because it was swimming inside dense clouds of dust and gas—a worthy conservatory that was light-years deep, built by the gods of Whim and Caprice.

Simon wandered through the transmission, glancing at a few hundred random planets. Then he asked his home-mind to pull out the most exceptional. Within those broad parameters, he found several dozen images of cloudy spheres orbiting suns within a hundred light-years of his comfortable chair. When he came across the closest world, Jackie returned.

"Alpha Centauri B's largest world," she said in her most teacherly voice. "The planet that some mentally impoverished soul named New Earth, back when all we knew was that it had liquid water and a living atmosphere."

Simon had never been so close to that alien body. The image was that clear, that astonishing. Simon felt as if he was floating in low orbit above a shallow black sea. Microbes accounted for the dark water—multitudes of tiny relentless organisms that ate sunlight and spat out just enough oxygen to be noticed by astronomers centuries ago. But the tectonics of New Earth were radically different than those back home, and for a host of reasons, the alien atmosphere could never support a flame, much less a vibrant ecosystem.

"To date," Jackie continued, "our full survey has found nine million and forty thousand living worlds. That number and these images won't be made public for another few months. We're not done, and we expect several million more. But to date, Simon . . . as of this moment . . . only eighteen planets show unmistakable signs of multicellular life and intelligence. Of course we might be missing something small. But after this long, with these incredible tools and nothing closer to us than eight thousand light-years' distance . . . well, darling, it makes a curious mind wonder if intelligence is a cosmic fluke, or worse, God's best joke. . . ."

"I hope not," he muttered.

Jackie nodded in agreement. "Now for my fine surprise," she went on. "One tiny portion of the sky is off-limits. Did you know that? The Powers-That-Be have rules. Nobody but them can look along one exceptionally narrow line. And we didn't look, at least not intentionally. Except there was an accident last week, and supposedly nothing was seen and of course we recorded nothing. But I thought you'd appreciate a glimpse of what nothing looks like, provided you keep this in a very safe place."

Against the stars, a tiny glow was visible—like a comet, but burning hotter than the surface of any sun.

"It's Hektor," Jackie reported. "Dr. McKall is still out there, still charging forward. Another ten thousand years, and your old colleague will finally get where he's going."

Simon was discussing salt contents with an irritable sensor on the far side of the moon, and then his home-mind interrupted. "There has been an incident," it reported. "On Earth, and specifically, on the campus—"

"Jackie?"

"I know nothing about her," the voice admitted. "Stanford and the surrounding area are temporarily out of reach. A riot is in progress. There's still a good deal of fighting. I can't offer useful insights."

"A riot?" he asked incredulously.

"Yes."

"But why?"

"There was a story, only a rumor." The mind was designed to show sorrow, but in tidy amounts. And no outrage, which was why it stated flatly, "According to the rumor, the Stanford community was holding back foodstuffs, and approximately one million citizens organized a flash-protest that mutated into violence, and the civil authorities reacted with perhaps too much force—"

"What about Jackie?"

"I have lists of the dead and injured, sir. The tallies are being constantly updated. Eighty-three are confirmed dead, with perhaps another hundred to be found. But I will tell you when I find her, wherever I find her."

Simon refused to worry. The odds of disaster falling on one eager graduate student were remote. Tens of thousands attended that big old school, and no, letting his mind turn crazy was a waste of time. That was the conviction that he managed to hold on to for eight minutes of determined, rapidly forgotten work. Then he cut off the sensor in mid-sentence, and to his house he said, "Any word, contact me."

"Of course, sir."

His home—Jackie's home, and his—was the only building on a tiny green island of buoyant coral floating on the moon's surface. What seemed critical at that moment was to escape, separating himself from whatever reminded him of her. Alone, he jetted above the oil-restrained surface of the sea, scaring up birds and rainbow bats. Then he docked at a web-tower and boarded an elevator that quietly asked for a destination.

"Up," he snapped. "Just up."

The Iapetus roof was much more elaborate than those covering the inner worlds. It was blacker than any space, and it was dense and durable, and if civilization vanished today, it would likely survive intact until the Sun was a cooling white ember. That durability was essential. Simon rode the elevator past the final ceiling, emerging on the moon's night side but with dawn slowly approaching. He stopped the elevator before it reached the overhead port. Then he gazed at the Sun's emergence—a tiny fierce fleck of nuclear fire that was dwarfed by a thousand lasers pointed at this one modest moon of Saturn.

A coalition of ice-belt nations had joined forces. Mercury, long considered too expensive to terraform, had been purchased and partly destroyed, doctored rock and iron fashioned into a fleet of enormous orbiting solar collectors that collected energy that was pumped into beams of light that could have destroyed ships and cities and even whole worlds. Could but never would, what with their elaborate programming and too many safeguards to count. But it was the Sun's focused power that slammed into the tough black conservatory, and it was the conservatory that captured and channeled this resource into the artificial suns that made Iapetus glow to its core. This was a cheaper, sweeter solution than building and maintaining fleets of fusion reactors. Every photon was absorbed, and as a result, life had warm bright happy water—a place where he wanted to live forever.

Jackie had always enjoyed this part of the ascent; that's why Simon stopped here now. Stopped and waited, knowing that she was alive and well, but wasn't it the right thing to do, worrying as he did?

The situation on Earth was always chaotic.

He understood that Jackie had friends and colleagues to help before she could send word his way, and she might not be able to do that for a long time, considering the riot and the normal censorship demanded by the Powers-That-Be.

No, he wasn't sick with worry.

Then the home-mind called out, "Sir."

Its voice was tinged with sorrow.

More than anything else, what surprised Simon was how quickly he severed all contact with the universe. Before another word was offered, his small sharp mind had made its decision and cut the channel to his home-mind, never bothering to tell it of his intentions.

If Simon knew nothing, then Jackie was alive; and that would remain true for as long as he could endure the cold boundless space about him and the sound of his breathing coming again and again in deep, useless gasps.

Makemake

"Sir, please. Please. What generosity may I offer you? I have marvelous teas, strong and sweet, or weak and sublime."

"Something sublime."

"And once again, sir, I apologize for any intrusion. For your time and sacrifices, I will be eternally grateful."

Simon nodded and smiled blandly, asking nothing of his host. The Suricata were bright social entities famous for rituals and reflexive politeness. Answers would come soon enough, and knowing these people, he was certain that he wouldn't much like what he was about to learn.

The tea was served cold in tiny ceremonial bowls.

"You continue to do marvelous work for us, sir."

"And I hear praising words about you," Simon replied. "Wiser minds than I say that our mob has never enjoyed a more efficient or responsible security chief."

The narrow face seemed pleased. But the chief's four hands gripped his bowl too firmly, long black nails scraping against the white bone china.

Simon finished his drink and set it aside.

The chief did the same, and then with a portentous tone said, "Perhaps you heard about the refugee transport that arrived yesterday. Of course you have, who hasn't? Eleven hundred and nine survivors, each one a victim of this monstrous war, and all now quarantined at the usual site."

One hundred kilometers above their heads stood a roughly camouflaged, utterly filthy ice dome—the same jail-like dumping site where Simon had lived for his first three months after his arrival.

"My problem," the chief began. Then the bright black eyes smiled, and he said, "Our problem," as a less than subtle reminder of everyone's civic responsibilities. "More than one thousand sentient entities wish to find shelter with us, but before that can happen, we must learn everything about these individuals. The political climate might be improving, but tempers and grudges remain in full force. Our neutrality is maintained at a great cost—"

"Who is our problem?"

Simon's interruption pleased the chief. At least he sighed with what seemed like relief, watching a creature twice his size and older than anyone else on this world. "We have found a war criminal," the chief admitted. "A much-sought individual, and I believe a colleague of yours from long ago. According to reliable accounts, she was complicit in the Martian genocide, a consultant in two slaughters on the Earth, and her role in the Ganymede struggles has been rigorously documented."

"We're discussing Naomi?"

Embarrassed, the little face dipped until the rope-like body lay on the carpeted floor. "One of her names, yes. She attempted to hide her identity, but what was a clever and thorough disguise the day she left Titan has become old and obvious." The Suricata were lovely creatures, their dense fur softer than sable, warming fats and fantastic metabolism keeping them comfortable inside their icy tunnels. The chief stood again, hands fidgeting with readers and switches while his tail made a quick gesture, alerting his guest to the importance of his next words. "We are quite certain. This is the infamous Naomi. We find ourselves holding perhaps the most notorious atom still at large."

"From the Blue Camp," Simon added.

Eight Camps existed at the war's outset. Attrition and political necessities had shrunk the field to two Camps, and the Blue was officially extinct.

Politely but firmly, the chief cautioned, "As far as the Kuiper neutrals are concerned, there are no Camps. There is us, and there is the War. At no time have we taken sides in this ridiculous conflict, which means that we must remain immune to favoritism and even the most tentative alliances."

In other words, to save their peace, they had to be ruthless.

Simon nodded. "Why here?"

"Excuse me, sir?"

"I understand why Naomi would want to escape. Of course she'd try to flee. But the woman I knew had a talent for guessing where the tunnel would turn next. Throwing everything into a long journey out to the edge of inhabited space . . . well, coming all of the way out to Makemake strikes me as desperate, at best. And at worst, suspicious."

An unwelcome question had been asked. The chief responded by invoking his rank, stiffening his tail while the hands became fists. "Desperation is the perfectly normal response now, sir. You don't see the intelligence reports that I am forced to endure. You don't study the elaborate simulations and their predictions for continuing troubles. At least 90 percent of the Solar System's population has been extinguished. At least. Worlds have been ruined, fortunes erased, but sitting inside this careful peace of ours, you cannot appreciate how miserable and frantic and sick these minds are . . . those tortured few who have managed to survive until this moment."

Charitably, Simon said, "I agree. I don't know how it would feel."

The chief sighed. Regretting the present tone, he admitted, "I have nothing but respect for you, sir. Respect wrapped around thanks. What would we have done without your talents? What if you had found your way to another Kuiper world . . . to Varuna, perhaps? Today they would have a great atom working miracles with limited resources, and we would have to turn aside every soul for lack of room and food and precious air."

Varuna had been a disaster—too many refugees overtaxing the barely begun terraforming work. But Makemake, and Suricata society in particular, had endured this nightmare rather well. Simon knew this game. With feigned conviction, he said, "You would have done fine without me. You are a marvelous and endlessly inventive people."

His host smiled too long.

"May I ask another question?"

"Yes, sir," said the security chief.

"Why am I here? You've identified your prisoner. And since I haven't seen her for at least eight hundred years—"

"Nine hundred and five Martian years," the chief interjected.

"I don't see any role for me to play." Simon stroked the small gray beard that covered half of his thoroughly human face. "Unless of course you want my testimony at the trial."

"No," the chief blurted.

Simon waited, his patience fraying.

"The trial was concluded several hours ago. The judges have announced the sentence. Nothing remains now but the execution of the prisoner."

"Ah." Simon nodded. "You brought me here as a courtesy?"

The black eyes gazed at him, hoping to say nothing more.

But despite many decades of living among these souls, the atum couldn't quite piece together the clues. What would have been obvious to any native citizen of this cold, isolated world was invisible to him. Finally, with honest confusion, Simon confessed, "I don't know what you want."

"It is what the prisoner wants."

"Which is?"

"Naomi has memorized our laws," the chief confessed. "And she somehow learned that you were living here."

The atum began to feel ill.

"She has invoked a little-used code, naming her executioner."

"I won't," said Simon.

But the Suricata were a deeply social species. Choice did not exist in their civil code. Duty to their city and their world was seamless. And no less could be expected from those who came to live in their cathedrals of ice and bright air.

"If you refuse this honor," the chief said flatly, "then we will be forced to begin banishment procedures."

Simon took a moment to let the possibilities eat at him.

"She wants me to kill her," he muttered quietly.

"To my mind," the chief replied stiffly, "the woman is already dead. With this gesture, you will be completing the act."

In a multitude of places, including inside at least one atum's mind, there were precise and effective plans for the transformation of this little world. Makemake was named after a Polynesian god of creation. Specifically, for a deity worshipped by the isolated citizens of Easter Island, which, as landmasses went, was arguably the most remote portion of the Earth colonized by the first human species. If the war hadn't erupted during the last century, Makemake's transformation would have begun. A dozen artificial suns were delivered while Mars was dying again. They were in orbit, patiently waiting orders to ignite. This early step could easily be taken: Turning methane snows into a thin atmosphere clinging to a body barely half the size of Pluto. But even that modest step brought danger. Why make yourself a prize to distant but vicious enemies? Eight decades of unmatched struggle had ravaged richer worlds, and if not for the thin traffic of refugees that still managed to limp their way out into this cold, lightless realm, there wouldn't be any traffic whatsoever.

The ranking atum thought about these weighty matters, and he considered his own enormous luck—not just to survive the War, but to then discover a life that gave him authority and privilege beyond any that he'd ever known.

Simon usually took pleasure from his walks on the surface. There was majesty to

this realm of cold and barren ice. The black sky was unmarred by clever lights and ship traffic, giving it an enduring appeal. The glimmers and flashes of great weapons weren't visible any longer. Neither surviving Camp was able to marshal those kinds of monstrosities today. Which was why the determined mind could forget, looking at the ember that was the sun and seeing nothing else but the faint dot that was Jupiter, believing any story but the miserable one where almost every life was destroyed, and every world, including the Earth, was at the best only barely, painfully habitable.

"What are you doing?" asked a sharp, impatient voice.

"As little as I can," he admitted to his companion.

"Focus," she implored.

"I should."

"You haven't changed at all, have you, Simon? You still can't make yourself do the distasteful work."

"That's my finest flaw," he replied.

The humor was ignored, such as it was. Her own focus was relentless, her shrewdness undiminished, and as always, Naomi had her sights locked on some self-important goal. Stopping abruptly, she told him, "I didn't select you just because we were once friends and colleagues. No, Simon. I picked you because you are perhaps the most consistent creature that I've ever known."

"What do you want, Naomi?"

"Not yet," she teased. Then she began to walk again, marching vigorously toward the small, undistinguished crater where for years now prisoners like her had been executed.

Naomi and Simon were the same size, give or take a few grams. But in a calculated bid to ingratiate herself with her now-defeated Camp, she had long ago surrendered every hint of her human form. The woman resembled a scorpion, complete with the jointed limbs and an elaborate, supremely graceful tail folded up beneath her life-suit. Her carapace was designed to withstand a hard vacuum, but not the cold. Her suit was heated, and a simple recyke system kept her green blood fully oxygenated. Disable either, and she would die slowly and without fuss. The chief and various experts had advised Simon to cripple both systems and hasten the act. But ice crystals and suffocation were astonishingly violent acts, if only at the cellular level. Simon held his own opinions about how to commit murder, and much as he hated this wicked business, he would carry out the execution however he damn well pleased.

Seemingly without fear, the scorpion scuttled across the ice.

Ignorant eyes might imagine Simon as the doomed soul. And indeed, many eyes were watching their approach. Cameras supplied by both Camps had been unpacked and activated for this singular occasion. The machines were witnesses, hardened links and a multitude of security safeguards linking them to the Solar System. In principle, nobody could be fooled by what happened next, unless what they wanted was to be fooled.

Simon took longer strides, catching the prisoner just short of the crater wall.

And Naomi slowed abruptly, her adrenaline or its equivalent suddenly failing her. Eerily human eyes glanced up at Simon, and on their private channel, she said, "I've always liked you."

He was startled but careful not to show it.

"I know how that sounds, and I know you don't believe me. But from the first time we met, I have held the greatest respect for your abilities."

"Where was that?" he asked.

"The first time?"

"I'm old," he admitted. "Remind me."

She didn't simply mention Venus. With astonishing detail, Naomi described a dry meeting between members of an air-plankton team—the kind of routine nonevent that Simon would forget in a week, at most. “You made skeptical comments about our work. Perceptive, illuminating comments, when you look back at the moment now.”

“That impressed you?”

“In a peculiar fashion, you seemed more secure than the rest of us. More honest, less willing to compromise yourself with the politics.”

He shrugged, saying nothing.

“I'm sure you took notice: I was a flirt and shameless when it came to working the room. And I don't think that ten Simons would have held as much ambition as I carried around in those times.”

“Probably not,” he conceded.

“Did you ever want to sleep with me?”

“No,” he lied.

But she didn't seem to care, eyes closing while the hard face nodded wistfully. “If I'd paid attention to you . . . if I had let myself learn from you . . . my life would have turned out quite a bit better, I think.”

It might have been a different life, or perhaps not. Simon realized long ago that no matter how creative or well informed the soul might be, there was no way to see the future that rose even from the wisest of decisions: Ignorance as epiphany, and with that, freedom from regret.

They reached the lip of the crater together—two tiny entities on the brink of a neat flat-bottomed bowl. Suddenly he was in the lead, his pseudo-adrenaline rising out of a gland that was among his youngest. With a dry, tight voice, he said, “You named me. You claim that there's a reason. And if you don't tell me why, I'll be happy.”

“But I have to tell you,” Naomi replied.

“I can't help you,” he warned. “Maybe you think that I've got power here, but I don't. Or that I'm not strong enough to do this, and I'll lose my will, and then the Suricata would give up trying to punish you—”

“I don't expect your help or your weakness,” she interrupted. “You are a soft-hearted creature. But that isn't why I selected you.”

“Soft-hearted,” he heard, and the image mysteriously gnawed at him.

Naomi continued, saying, “The two of us, Simon . . . we atums have seen a great deal during our extraordinary careers.”

He took a long bounce, ending up on a flat stretch of rock-hard water ice. “I suppose we have, yes.”

“My career,” she began.

He forced himself to slow, glancing up at the cameras hovering against the eternal night sky.

“Being an atum is a blessing, and I feel blessed. I know how it looks now, the insanity that drove us into the Camps. Using our knowledge about building worlds to kill the worlds instead. But think of the history that these eyes have witnessed. The geniuses that I've known and our important work, and the foolish tragedies too . . . everything that comes with remolding and giving life to dozens and hundreds of worlds, little and great. . . .”

“What is it, Naomi?”

“I kept a diary,” she muttered.

“Many do.”

“But my diary is far more complete than the others,” she maintained. “From the first entry, I've used only the best methods, the most thorough tricks. This isn't just text and images, Simon. I underwent scans of my mind, uploaded memories, censoring nothing. Nothing. And then I employed a military-grade AI to act as an overseer

and voice. This is my life, the splendid as well as the awful, and I don't think any citizen in any venue has ever achieved the scale that I've managed."

"And my role?"

"I'll tell you where I hid it," she admitted. "You're good and decent, Simon, and you can appreciate the value of this kind of testimony. Ten thousand years from today, won't the citizens be hungry to understand the people who shaped their history—those who first colonized the Solar System?"

He glanced up at the Sun and that feeble band of dust riding on the ecliptic, much of it created by explosions and obliterating impacts. "You're certain there's going to be an audience then?"

"We've made our mistakes," she conceded. "But this war will end. And shouldn't we give our descendants every lesson possible? 'Don't do as we did,' we will tell them."

"I did nothing too terrible," he maintained.

Suddenly Naomi ran short of praise for her executioner. With her voice breaking, she pointed out, "No, you're just as guilty as me, Simon."

"Despite my good opinions," he countered.

"A billion clever insights accomplish nothing, if the voice that mutters them isn't compelling enough to change one action."

They were near the crater's center, the execution ground defined by a neat black circle as well as pits made by the blasts of weapons and warm bodies rapidly growing cold. Reach that line, and their private line would fail. Only an unsecured public line would allow them to speak to one another. Simon felt his face filling with blood—the blush marking just a portion of his deep, conflicted feelings. He tried to keep his voice under control, but each word came out hard and tense. "It's time, Naomi. I'm going to stop your oxygen and heater now, and we can walk the rest of the way together."

"My diary?"

He didn't answer. "Your carapace is a fine insulator," he said. "And if I'm right, we'll have several minutes before you spend your last breaths."

"But you will rescue my diary, won't you? I'll tell you where it is, and you can use it however you want. As a historical record, if you want—"

"And only for that reason," he muttered.

Emotions made her shiver, but she acted satisfied. One conspirator to another, she said, "I did genuinely like you, Simon."

He touched the controls on her back, powering down both systems.

"And you're a familiar presence," she conceded. "If a person has to die this way, don't you think she should be with a friend?"

"I'm not your friend, Naomi."

She didn't speak.

Oxygen had stopped entering her blood, and in the next moment, the bitter chill of Makemake began to creep inside her. "I don't know if I can make it to the circle."

"You can."

"Just say that you're my friend," she begged. "Please. I don't want it to end this way."

From the satchel on his hip, Simon pulled out a small railgun, and he aimed and fired a slug of iron-clad stone into the scorpion's brain. Naomi stiffened, and a moment later, collapsed. He grabbed a front leg and dragged her across the neat black line, then backed away to allow the cameras to descend and investigate the body with a full array of sophisticated tools. Breathing hard, he looked at the corpse, and with a steady voice he pointed out, "You helped murder hundreds of billions. And until today, you didn't throw two nice words my way. And I'll be damned if I'm going to help your beloved memories have any life beyond today."

* * *

"Thank you," the chief said.

He gave his thanks once and then again, and then twice more, with even greater feeling.

Then with an air of concern, the chief continued. "This must have been hard on you. Regardless of what she was and how much she deserved her fate—"

"It was difficult," Simon conceded.

The little creature seemed giddy with compassion. "This won't happen again. I promise."

"But I'm here if you need me," Simon replied.

A dark, dark joke.

The chief nodded warily.

"She brought it with her. Didn't she?"

The chief hesitated. "Brought what?"

"Her diary. The AI with its attached memories. Naomi came here with the hope of using it as a bribe, hoping to manage a better deal for herself." Until Simon said the words, he didn't believe it was true, but then they were drifting in the air and he believed nothing else.

The chief suddenly had no voice.

"And I'm guessing that one of you two brought me into this scheme. She would tell me that the fabled diary was somewhere else, somewhere hard to reach, throwing the scent far from Makemake. Naomi must have told others about her self-recording project, not to mention leaving an ether-trail from the hospitals and various specialists brought into the project. But if I thought I had this special knowledge, and if I acted according to my good noble instincts . . . well, I can see how this would have distracted a few players while you happily sat on the prize."

"But why would I care?" the little Suricatan managed.

"Because Naomi had a wealth of experience, and that's the part of her estate you wanted. Her expertise. Once this war is finished, Makemake will be able to reinvent itself, and prosperity is going to come easier when you enjoy the free and easy guidance of a highly accomplished atum."

"Naomi's dead," the chief offered, in his own defense.

"She is. And she isn't. No, in her peculiar mind, I think the creature held a different interpretation of events." Simon shrugged, the last traces of anger washing out of him. "I saw a small useless death on the ice, while she saw life inside a new mechanical mind. When you're as greedy as Naomi, it's amazing what you can convince yourself of . . . and who knows, maybe that old lady has a point in all of this. . . ."

Earth

The purpose of the visit was meet the next generation of atums, in classes and privately, assessing the strengths as well as the inevitable weaknesses of these graduates before they were scattered across the Unified System. But several grateful university officials came to the chief atum, begging for a public event that would earn notice and praise, both for them and their ancient institution. Simon agreed reluctantly. He would give a speech, stipulating only that his audience was kept small—a diverse assortment of students and faculty assembled in some minor lecture hall. He understood that any public event by someone of his rank would attract attention. What he wanted to escape were situations where multitudes of eager, ill-prepared souls would cling to every word, unable to tell the off-hand remark from rigid mat-

ters of policy. But his request, harmless and rational to his mind, led first to strict quotas, and when the demand proved too enormous, a lottery system where tickets were awarded and sometimes sold for fantastic sums—all for the honor of cramming inside a long hot room with forty thousand equally enthralled bodies, every eye and a few secret cameras staring at a figure as old as terraforming, or nearly so.

In appearance, Simon had remained stubbornly, endearingly human. Pieces of him were still physically tied to the young Martian, though those archaic tissues consisted only of a few cells scattered through crystalline overlaps, metabolic engines, and bundles of smart-light and nulls and voids. His face and body remained tall, but only in contrast to the entities gathered about him. He began with a bright smile and a voice crafted to come across as warm and comforting to the average citizen, thanking everyone for surrendering a portion of his busy day to listen to an old fellow rattle on. Then he told a story from his childhood, describing in detail how his father once handed him a nano-bomb seed—one of the old marvels intended to transform Mars from a wasteland to a paradise. “I didn’t understand the significance of that crude tool,” he confessed. “But I held the miraculous seed in both hands, believing that in my brief life, this was the most important object that I had ever touched. Yet at the same moment, I was stubbornly ignoring my own soggy brain. And everyone else’s, too. But minds are the only marvels worthy of our lasting respect, and I can only wish that each of us holds that truth close to us as we pass through our future days.”

Simon was smaller than his original hands had been, smaller than that early seed. But by the same token, he was larger than the rock and iron ball that was Mars. Like any modern mind, a good portion of his intelligence—facts and language, customs and a multitude of instincts—were held in the Earth’s community mind. He remained a unique citizen, endowed with his own personality and ancient, often quaint notions. But as long as citizens wished to stretch toward infinity, room was going to come at a premium. Carrying your life experience inside one isolated skull meant large, inefficient bodies needing room to live. And if those bodies achieved even modest reproductive rates, any world would be swamped in a day, and shortly after that, ten thousand worlds more.

As Simon liked to do on these occasions, he reminded every ear that the duties of an atum, particularly one granted his terrifying station, was to help select a direction into the future, that determined line balanced between wild freedom and despotic rule. What kinds of biology would embrace each world; how many children would each of these rich lives be allowed; and under what terms and what punishments would the government hold each of its citizens accountable. Everyone understood the consequences of mistakes, but just to be certain, he mentioned the First War and the Purge that followed, then the subsequent Battle of the Kupiers and what was dubbed the Final Purge, as if that species of political madness had been wrung from civilization forever.

“Nothing is forever,” he warned, “no matter if it’s an individual life or the one hundred billion year life of the smallest, reddest sun.” Then his voice grew in depth and power, taking the sleepest in the audience by surprise. “Change is inevitable,” he promised, “but little else about the coming forever is certain. I would imagine that everyone here holds that noble wish that intelligent life will prosper in the universe, spreading to other suns and eventually to all the ends of the Milky Way. But that remains far from certain. In our ongoing studies of the sky, we have observed what has to be considered a paucity of intelligence. Today, those civilizations nearest to humanity are just beginning to hear the Earth’s original transmissions, radio and radar whispers barely hinting at everything that has happened since, and it is presumed that in another several thousand years, a slow rich conversation will commence. Or our neighbors will respond to our presence with the most perfect, telling

silence. The fertile imagination easily conceives wonders as well as horrors coming from this unborn history. But this man before you, this atum, believes that the real gift of the Others will be to suggest to us the richest, most stable answers to the eternal questions of life and living well in a universe that holds minds such as ours in such very low esteem."

Tradition dictated that the chief atum had to make his or her residence on the Earth, but since Simon had no role in maintaining the biosphere, he was free to live where he wished. He earned a few grumbles when he requested a modest structure erected on top of the newest conservatory—little more than one dome and various substructures meant to house assistants and the usual secure machinery demanded by his office. Some complained that the new chief didn't trust the good work being done by the local atums. Why else would he perch himself in the vacuum, his feet standing on top of one hundred trillion heads? But explanations did no good with those people. He spoke a few times about his love for space and the illusion of solitude, but after that, he gave up offering reasons. For as long as he held this post, enemies would find reasons to distrust him, and as long as his antagonists thought in small terms, he would be safe wherever he chose to live, right up until the day that this office was lost to him.

"I have an errand for you," Simon told his favorite lieutenant. "A mission of some importance, and I wouldn't trust anyone else with it."

The creature turned vivid blue, and twenty limbs shook from the apparent compliment. Then a soft clear voice said, "Sir," and then, "I am honored," before asking, "What is my mission?"

With a thought, Simon delivered a set of encrypted files and the necessary keys, plus a few helpful suggestions. Then he waited while the files' headings were studied. The assistant had a quick mind; it took only a moment for the limbs to stiffen, fear turning the body into a dark, despairing violet.

"Sir," the voice began.

"What have you found there?" Simon kidded.

"I didn't know about these matters."

"You didn't, did you?" The atum nodded agreeably. "That's what you should mention when you act on your knowledge."

"Sir?"

"You are going to act, aren't you?"

The assistant turned black and cold, a begging voice complaining, "This is not fair, sir."

"Little is," Simon agreed.

"By law, I have to take what I know to the proper agency."

"I wouldn't have it any other way, my friend."

The creature muttered to itself.

"But please, will you do one small favor for me," Simon continued. "Surrender this evidence to the Office of Exotic Biology. And yes, they have jurisdiction in these matters. They are perfectly acceptable authorities, and no one will fault you, even if you choose to someday mention these events to anyone else."

Perplexed but obedient, the assistant left on his unexpected mission.

Alone, Simon slipped into a gossamer lifesuit and stepped out onto the hard surface of the newest conservatory. The sun was a faint glow just beginning to climb over the geometrically perfect horizon. Mercury was a dull dot almost invisible against the stars, its top fifty kilometers peeled away and refined into habitats ranging from mountain-sized to smaller than a small walnut. Venus was nearer and much duller, encased in half a dozen finished conservatories whose main purpose

was to grab and sequester every photon falling from the sun, allowing the interior heat to build and build until the entire planet melted—a liquid world whose crust and then mantle could be siphoned off with relative ease, creating hundreds of trillions of living worlds that would eventually form a great ring around the sun.

Jupiter remained a wilderness of space and raw materials, accompanied by its liquid worlds, infested with life but still not full. Uranus and Neptune were brighter than ever, the terraforming of the little giants just beginning in earnest. Once again, Mars was being made into an Earth-like world, but this time the work involved improved conservatories stacked on top of one another, the crust laced with sprawling caverns and hidden seas. And largest to the eye was Luna. Nearly as large as Earth, it was a vast balloon composed of vacuum-filled chambers and nonaqueous species. Again, its design was aimed at growth, machines and organisms busily digesting the rocky body. But like every world in the Unified System, the genius that designed this transformation always aimed for a special stability. Each planet functioned as a nest of deeply social insects. As long as all the pieces and players cooperated, life thrived. But if the calm failed, the queens of the nest would perish, and just as important, the lowly and the innocent would inherit what remained.

Simon had helped craft this ruthless and obvious system. Humanity might have the power to draw life in any form it wished, but there still existed the Darwinian god holding sway over the majestic mess, and for the next eon or two, the best would succeed a little more often than their peers.

Some days, it seemed that reaching this station was a miracle. But on this early morning being the chief atum felt entirely natural. Of course he was important. Who else was as old as him and as short of enemies? Who else could claim that they had been there at the beginning, or nearly so, yet never took part in any conspiracy or slaughter of note?

Without sound, Simon started to laugh, enjoying the irony. The absence of ambition was the ultimate ambition, it seemed.

Then his house-mind announced a visitor.

Simon didn't ask for the name. He knew. And turning back toward his home, walking slowly and then not so slowly, he said to the house, "Tell Lilly to make herself comfortable. The criminal is on his way."

"How did you manage this?" she blurted. Then in the next instant, she added, "This has to be a mistake. Somebody's trying to frame you, and they didn't even manage a believable job of it."

Like Simon, Lilly had kept hold of her human features. She sat and watched as he settled before her, and when he didn't act appropriately concerned, she added, "This is the worst kind of scandal. If I'd told anyone—"

"But you haven't," he interrupted.

"Because I thought I owed you at least the courtesy of looking into your face, seeing if there was any explanation for what you've done."

He shrugged and said nothing.

"Starships are forbidden," she snapped. "No vessel except sterile drones can legally pass beyond the Kuiper belt."

"I am well aware of the laws—"

"And the kind of ship you've built," she blurted. "Dammit, Simon. It shatters at least a thousand codes. If you were to ride this sort of magic seed out into the cosmos . . . you could go almost anywhere . . . and then you could infect and transform any body. Any world. The outlawed technologies and the government-only technologies that you've assembled here, using your station as chief atum—"

"Impressed, are you?"

Lilly remained a passionate creature, dark and lovely but always focused on the needs of her life's mission. "I'm scared, Simon. Terrified. What were you planning to do with this monster seed?"

He laughed and nodded, and then he quietly confessed, "The seed has room for one small passenger."

"For you?" she whimpered.

"Me? Hardly." He sat motionless, carefully watching his guest. "I have a mission in mind. But by training and inclination, I suspect that I wouldn't make a worthy pilot for this kind of work."

"What work?"

Simon leaned forward, one hand and then the other taking both of hers. It was pleasant, holding onto the woman like this, feeling her heat pass into him. He was thinking about Lilly and his father sleeping together on the red wastes of Mars. He recalled that moment on Venus, in the darkness, in the wind. Then he surprised both of them, lifting their hands and kissing the backs of hers even as he slid onto his knees, saying nothing, but tasting a faint delicious salt against his lips and the tip of his tongue.

A World Unburdened by Names

The object was noticed and instantly measured—a small glimmer approaching along the expected vector, closing rapidly on the decelerating starship—and McKall's first reaction was an energetic laugh punctuated with several choice curses. "Long enough it took them to chase us," he declared to his hounds and fireworms and the other powerful, fearless members of his unabashedly loyal crew. "For now, watch our enemy. Study what it shows us, and do nothing. Then at ten thousand kilometers, obliterate it."

Whatever the weapon was, their fifth blast managed to vaporize both its armor and the surprisingly simple meat inside.

Celebratory drinks were served.

For many centuries now, the starship's captain had been worried. Onboard mirrors showed that the Solar System behind them had suffered wars and subsequent rebirths. Who knew what kinds of marvels these new generations had devised? But obviously, his concerns had been misspent. Several moments were invested in careful study of the vanquished enemy. The remnant dust presented a minor puzzle, composed of common iron and little else. Why would anyone go to such trouble, sending what looked like a fancy cannonball after him? Too late, he wondered if perhaps the device had been a decoy, a ruse. He confessed his fears to his security chief, and the chief initiated a ship-wide search for tiny breaches and undetected invaders. Nothing was found. Every system was working properly. Twenty-three minutes after that cannonball was first seen, Earnest McKall retreated to his quarters—the only private rooms allowed inside the enormous starship—and he had halfway prepared a fresh cocktail when he noticed the tiny shape of a girl or woman clinging to the ceiling.

Softly, very softly, he asked, "How did you—?"

"Slip onboard? While you were fighting the bait, the hook approached from ahead of you. I used your engine's fire as camouflage. And as for the rest of my trickery . . . well, explaining everything is not my consuming goal."

In secret, McKall signaled for help.

Nothing changed.

An instant later his metabolism had reached full speed, dragging his thoughts along with it. "What is your—?"

"Lilly."

He stopped talking.

"My name is Lilly, and thank you for asking." She was at least as swift as the ship's captain. "Do you have any other questions, Dr. McKall?"

"What is your goal?" he managed.

"What do you believe that I want?"

"To stop me, of course. We're not five hundred years from New Earth, and this is some last-gasp attempt to destroy my ship and me."

She was pretty and very small, no longer than a small finger, and it was difficult, even impossible, to take her seriously. Yet her voice had weight, rising from places besides her minuscule mouth. Amused, she explained, "But I don't wish to stop you. And I certainly don't want to destroy you. What I want—what I have halfway taken already, without you being aware—is complete control of this vessel and its crew. I am the new captain, and you are my dog."

McKall was furious, and he was terrified. Which emotion fixed his legs to the floor? He couldn't decide. But he discovered that moving any limb was impossible, and his voice was a breathless little gasp.

"You'll conquer the New Earth for yourself," he managed. "Is that your scheme?"

"Hardly."

The untasted cocktail fell from his hand, spilling sticky and cold across his bare feet.

"I just want your ship and its possibilities," she explained. Then she dropped off the ceiling and landed in his rich black hair, miniature hands gripping tightly, yanking hard. "My plan? We'll drop into orbit, and I will mine the local system, beginning construction of rings first and then a conservatory far above the atmosphere. Elaborate defensive works will be built, plus shields against interstellar catastrophe, and then I will wait for anyone who is foolish enough to follow after you and after me."

"But what will you do . . . with the world. . . ?"

"Nothing," she promised. Then thinking again, she added, "Except to watch its native life go about its business. Which is what any of us do on any given day. Isn't that right, Dr. McKall?"

The atum concluded his speech by answering the question that everyone would ask, given the chance. He posed it in his voice, wondering aloud, "And when, at long last, will we leave our Solar System for other suns and the rich new worlds waiting their chance to be claimed?"

Then he paused, offering an archaic smile while nodding slightly.

Cryptically, he said, "We shall embark when we are ready."

Then a little voice up front shouted, "And when will that be?"

Simon's most loyal assistant was obeying explicit instructions. He glanced at the many-limbed creature, answering, "Once all of our local homes are filled and happy, I would hope. We will embark as soon as we can trust our nature and our institutions not to use this migration as an excuse for easy growth and return voyages of conquest. When we have a worthy plan and the courage and discipline to trust in it. When starships no longer consume fortunes in energy and precious matter. When we have become adults, finally mature and responsible on all occasions. But most important . . ."

He paused briefly, enjoying the anticipation that washed over him.

"Most important," he concluded, "we will not leave this little realm of ours until we are children again. Wide-eyed, enthralled children who know what they have in their hands and hold it with all the care they possess." ○

The Birth of a Notion

The debut of any new publishing firm is a moment characterized by hope, promise, enthusiasm, hard work and dreams of success. Such is the case with Panverse Publishing and their initial offering, *Panverse One* (trade paper, \$14.95, 283 pages, ISBN 978-0-578-03842-1). *Panverse One* is a) an original anthology; b) first in a series; and c) composed of novellas only. With this bold and courageous tripartite assault on expectations and conventionality—short fiction doesn't sell, launch your enterprise with a novel, etc., etc.—editor and publisher Dario Ciriello merits our applause.

That is, if the fiction itself is any good. Which it most certainly is.

But before looking at the five stories herein, let's take a moment to focus on the gorgeous cover by newcomer Vitaly S. Alexius. Only twenty-six years old, Alexius already possesses a unique style and technical mastery that should ensure him a long career.

The first entry in the anthology is "Waking the City," by Andrew Tisbert. This post-apocalypse story reads like some oneiric combo of Andre Norton, Kathleen Ann Goonan, Rudy Rucker, and A.E. van Vogt. In a hostile jungle that exhibits a group consciousness, humans sustain a precarious existence. They dream of re-entering the last city of mankind, a mysterious redoubt to be made accessible by breeding up an avatar with certain mental powers. The young boy named Kuyo, our narrator, seems to be that scion. His adventures in search of his abducted lover Liana resonate both with John and Joseph Campbell.

Since Uncle River's story "Shiva Not Dancing" is partially concerned with the touchy subject of water rights in the American Southwest, it's tempting for

the reviewer to say that the whole novel is a case of "still waters running deep." Uncle River's preferred storytelling technique is one of surface calm belying psychic turmoil and deep significance below. His tales are seldom filled with conventional pyrotechnics or Big Moments. Instead, they are closely observed slabs of life, three-dimensional and rich. In this instance, a woman named Elissa Maas, meditator at a "pagan" temple, crosses paths with an earnest young scientist, a greedy land speculator, a spoiled teen, a right-wing preacher, and a host of other well-drawn characters over the course of several months of sweetly and ironically depicted American life.

Combine the lives of the famous Brontë sisters—and brother Bramwell—with Jerome Bixby's creepy tale "It's a Good Life!", then add a dash of the film *Heavenly Creatures*, along with a splatter of Philip José Farmer, and you might come up with something resembling Alan Smale's "Delusion's Song." In this gothic extravaganza, the British village of Hawthorth is translated to a milieu, where the subconscious roilings of the Brontës begin to churn the fabric of reality. Smale works cleverly in a manner akin to that of Rhys Hughes, and succeeds in building an odd landscape that mirrors our world in useful and entertaining ways.

Although Reggie Lutz chooses to christen his offering with the semi-ignoble title of "Fork You," the story itself is a splendid blend of comedy, pathos, and hillbilly shambolic fantasy. A feral child named Gladiola is adopted by a clan of inbred country folk, the Johnsons, and becomes a catspaw in a centuries-old feud. If Jeff Ford and Andy Duncan chose to rewrite Avram Davidson's "The House the Blakeneys Built," the result might resemble this compellingly oddball rural fable.

Finally, we get an exercise in one of SF's "power chords," the Big Dumb Object. Jason K. Chapman, in "The Singers of Rhodes," postulates an alien space station big enough to house a couple of million souls or so. Seemingly empty upon discovery by several rival human groups, its interstices are filled with what seem to be mere ET "rats," but which prove to be much more. Not neglecting the essential human drama, Chapman stages a stirring tale of reconciliation and self-discovery, with plenty of sense-of-wonder as well.

Editor Ciriello's broad and discerning tastes portend well for future volumes—and for Panverse Publishing as a whole.

A Fortress Around SF's Heart

Another optimistic soul: Warren Lapine, recently in the news for saving *Realms of Fantasy* magazine from extinction, has founded Fantastic Books as an imprint of his parent firm, Wilder Publications. The remit of Fantastic Books—guided in part by the capable and knowledgeable Marty Halpern, of Golden Gryphon repute—is to make worthwhile out-of-print SF available once more. As of this writing, their website features ten pages of titles, some of which are bound to appeal to readers of *Asimov's*. One novel that I am almost certain will retain its appeal is James Gunn's *This Fortress World* (hardcover, \$25.95, 180 pages, ISBN 978-1-60459-732-5).

Originally issued in 1955, the book marked the start of Gunn's long and prestigious career. The author was thirty-two years old at the time, having served in WWII, and the novel reflects a certain maturity, despair, and worldly savvy based on these veteran circumstances of the writer.

This Fortress World is pure noir. It stands shoulder to shoulder with contemporary paperback originals by John D. MacDonald, Bruno Fischer, Guy Brewer, and David Dodge. The book just happens to take place in a lively, convincing, and non-negligible SF milieu.

Now, too often people think "noir"

means simply "stories involving private detectives." But this is not the case, and there is no detective character in Gunn's book, although there is certainly a mystery of galactic import. Rather, noir is the portrayal of corruption, decadence, betrayal, selfishness, avarice, and short-sightedness. It's about power and the abuse of power. Gunn's work fits this description perfectly.

The Second Empire of our galaxy has collapsed long ago, leaving interstellar traffic of a reduced nature among isolated "fortress worlds" whose rulers foster ignorance and xenophobia among the rabble. On one such, Brancusi, Will Dane is an acolyte in the ruling Church. One day, an object that could crack open the stasis of the fortress worlds falls into his hands. His life becomes instant hell.

Gunn sets Dane on the run almost immediately, and he never stops running for the duration of the story. He is propelled from one catastrophe to another, a string of defeats climaxing in an ultimate bitter victory. He always survives by sheer will and force of character, although his character is not of the best. He brutally kills friends and enemies alike, and conceives a prejudicial attitude toward the one woman who loves him, for reasons of inbred social convention. Gunn employs the pulp technique of a constant stream of cliffhangers and setbacks magnificently, creating a kind of harried, fox-running-from-the-hounds atmosphere that keeps the reader tense and in suspense. The first-person narration supplements the violent action with philosophical and societal speculations, couched in a black emotional ambiance. Gunn's prose is a kind of brute proletarian poetry.

The symbolical usage of the fortress motif is splendidly done as well: The sheltered, callous, brain-numbed lives of the citizenry are depicted in terms of a protective, self-devised fortress around each individual's heart. Even such a minor incident as Dane being stripped naked is milked for its allegorical value, with Dane referring to his lost clothing as a kind of everyday fortress.

In a foreword, Gunn speaks of his motivation to write a kind of anti-epic, counter-space opera. He succeeded one hundred percent. The book is a refutation of the glory of empire-building, offering a from-the-gutter perspective on humanity's overweening ambition and lack of compassion.

Gunn also mentions that his first novel received scant attention in the SF world—perhaps because it was indeed too overwhelmingly against the romantic, utopian, goodness-triumphant impulses of the genre. Given this apparent lack of influence, it's hard to say that the book should be seen as a pivotal forerunner to much of what was to come. Yet, one can retroactively detect in *This Fortress World* everything from Bester's Gully Foyle, to some of Algis Budrys's early stories, to Laumer & Brown's *Earthblood*, to the work of Delany and George Martin, to cyberpunk, and down to M. John Harrison's postmodern space operas. Even if these later authors never knew of the Gunn book, its presence, one likes to imagine, was a kind of psychic node in the field, radiating out waves of change.

And now, thanks to Fantastic Books, a whole new generation of readers gets a chance to appreciate Gunn's neglected minor masterpiece.

Live Long, and Prospero

The debut of an individual novel is fraught in a similar fashion as the birth of a new publisher, although on a smaller scale, impacting fewer people. But to the one person most affected—the author—such an event looms just as large. So it's pleasant for me to report that L. Jagi Lamplighter (who in another incarnation is married to the accomplished SF writer John C. Wright) has distinguished herself with the appearance of *Prospero Lost* (Tor, hardcover, \$24.99, 347 pages, ISBN 978-0-7653-1929-6), the first book in a trilogy to be continued with *Prospero in Hell* and *Prospero Regained*.

Lamplighter's premise is disarmingly

simple, yet full of narrative potential: Shakespeare's play *The Tempest* represents a mostly factual account of real wizardry and historical personages. Now, longtime readers might recall a similar riff in Poul Anderson's *A Midsummer's Tempest* (1974). However, that novel was much more deracinating and estranging, insofar as it postulated an entire timeline where Shakespeare was the "Great Historian."

In Lamplighter's scenario, *The Tempest* slots neatly into our familiar world as a bit of secret history with implications down to the present, creating a ripe field for urban fantasy. Because Prospero and his children—yes, children plural: Miranda has six brothers and a sister now—are immortal, and walking among us in the twenty-first century. Not merely walking, mind you, but pulling arcane levers of the physical world, to govern such global matters as climate change and in fact the very nature of physics itself. With spirits from the vasty deep at their command, they are the secret masters and/or guardians of our species.

But even such demiurges are not immune to predators. Our story opens with a bang, as Prospero goes missing and Miranda is attacked by supernatural beasts unleashed by her own father's misguided experiments. Her only recourse for survival appears to lie in reassembling her bickering, far-scattered siblings into a cohesive family again.

This "Get the Band Back Together" motif is a potent one that allows for lots of globetrotting across different exotic and intriguing venues. Lamplighter exploits the possibilities very well, hustling Miranda and her assistant spirit Mab (the sprite in this case being housed in the artificial body of a male who looks like a stereotypical 1940's private eye) from New England to the Caribbean and beyond. Lamplighter nicely alternates heavy-duty action scenes with more contemplative and discursive ones. She's particularly good at filling in the Prospero Family's backstory in both explicit and implicit ways so that the reader

feels the weight of their history and long lives. Her dialogue is crisp and effective, ranging from humorous to touching. And the Prospero Kids we do meet are all delineated in distinctive fashion, sharing a familial aura yet distinct from each other.

My two quibbles are these: we don't get to meet the entire family in volume one, thus preventing us from grokking and assessing the crucial family dynamics in their entirety. If I recall my *Nine Princes in Amber* (1970) correctly (and that book is an obvious template for Lamplighter), we got to meet all the major players by novel's end, despite future surprises. Second, I felt that once in a while the book's fantasy elements drift from genuinely awesome to animation-cute. I can hear echoes of the bickering cast of *Shrek* (2001), for instance, in certain scenes that depict the dynamics among the characters, and that detracts from Lamplighter's otherwise original conceits.

Schorr Thing

I can hardly pretend that the following text will constitute an impartial review. But on the other hand, I am sincerely *not* wasting your time by touting work of dubious merit for personal gain. The book in question, by a world-acknowledged master, is a beautiful achievement well worth your precious dollars. You will not be disappointed.

The volume under discussion is *American Surreal* (Last Gasp, hardcover, \$39.95, 100 pages, ISBN 978-0-86719-709-9), the latest compilation of the newest paintings of Todd Schorr. I have been lucky enough to have Todd's fantabulous artwork appear on the covers of two of my books. I wrote the text for his last coffee-table opus, *Dreamland* (2004). And I consider the artist and his equally talented wife Kathy Staico Schorr to be my pals. But all this does not bias my perception of his paintings as magnificent canvases stuffed to the brim with fantastical touchstones of our favorite literature and cinema. Their objective glory outshines simple friendship.

Todd's work, a fantasia of popular culture filtered through Boschian dynamics, has never been stronger, in both its conceptual audacity and rigor, and in sheer technique. His combination of classical virtuoso brushwork and postmodern pop motifs, all cemented together by surreal logic and allegorical heft, produces art that is both timeless and of the moment. At the center of this rich volume are two huge projects: *A Pirate's Treasure Dream* and *Ape Worship*. Both depict overwhelming panoramic narratives that are at once personal and universal. These paintings boast fractal depths that reward minute scrutiny.

Todd's text detailing the history and methodology of these works, as well as a fine general assessment by scholar Susan Landauer, add prose icing to this sumptuous cake from the artistic bakery popularized by artist Robert Williams, whose concept of "lowbrow cartoon realism" limns, but does not totally capture Schorr's mastery.

The Other Side of Several Worlds

Do you know the name of Ludmilla Petrushevskaya? Don't feel bad if you are ignorant of her byline. I, too, was similarly benighted, until I received a copy of her story collection with the lengthy title, *There Once Lived a Woman Who Tried to Kill Her Neighbor's Baby* (Penguin, trade paper, \$15.00, 206 pages, ISBN 978-0-14-311466-6). This appearance of her fiction is certainly the most prominent showcase of her work in the USA to date, after decades of non-exposure, and thus we all remain non-culpable in our ignorance. But not henceforth. Because this little volume introduces a unique and essential voice in fantastika, you must become intimate with it at once.

In their introduction, Petrushevskaya's deft translators, Keith Gessen and Anna Summers, hail her as perhaps the best-known fiction writer currently working in Russia. But Petrushevskaya is no spring chicken, as she was born in 1938. Yet for many years she was silenced by the Soviets, who found her surreal fables

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and allegories too threatening, thus partially explaining her low profile abroad.

Although the editors divide her stories into several categories—"Songs of the Eastern Slavs," "Allegories," "Requiems," and "Fairy Tales"—Petrushevskaya's work possesses a unity of vision. She depicts the hidden backside of our reality, where the border between death and life is permeable, identities flow and shift and meld, and apocalypses are difficult to distinguish from quotidian existence.

In "Hygiene," a mysterious plague leaves its victims as black mounds of corruption, while those who survive possess "a bald scalp covered with the thinnest layer of pink skin, like the foam atop boiling milk." In "The Fountain House," a father endures dream perils to resurrect his dead daughter. "The Cabbage-Patch Mother" owns a Thumbelina-style daughter who lives in a matchbox. And in "Marilena's Secret," two separate women are magically blended into a sin-

gle giantess, "a girl-mountain . . . with a chest like a big pillow, a back like a blow-up mattress, and a stomach like a bag of potatoes."

You might be able to tell from the tiny samples of Petrushevskaya's prose I've given that her work exhibits a sly gravitas, a homely poetry that is never showoffy, but always in service to the tale and its beauty. She reminds me sometimes of Isaac Bashevis Singer in that regard, as well as in her affection for the daily rituals and routines of her protagonists. Reading the stories here that are set in a recognizable Russia (others occur in timeless, far-off lands), one gets a poignant portrait of the endurance and despair of that nation's oft-beleaguered citizens.

Heir to Kafka and the Brothers Grimm, Petrushevskaya also aligns herself with the great modernist writers of fantastika, and thereby makes herself one of our genre family. ○

SF CONVENTIONAL CALENDAR

Memorial Day is the year's biggest weekend. All the general SF/fantasy events then are good bets for Asimovians. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, and info on fanzines and clubs, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 5 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard. —Erwin S. Strauss

MAY 2010

- 13-16—**Nebula Awards Weekend**. sfwa.org. In Florida. SF/Fantasy Writers of America meet. Note new dates.
- 14-16—**LepreCon**. For info, write: Box 26665, Tempe AZ 85285. Or phone: (480) 945-6890 (10 AM to 10 PM, not collect). (Web) leprecon.org. (E-mail) lep36@leprecon.org. Con will be held in: Mesa (Phoenix) AZ (if city omitted, same as in address) at the Marriott. Guests will include: G. R. R. Martin, C. Vess, J. A. Owen. General SF/fantasy, with art emphasis.
- 14-16—**DemiCon**. (515) 274-7654. demicon.org. Hotel Fort Des Moines. D. Maitz, R. Hevelin, G. Parmentier, T. Tomomatsu.
- 14-16—**MobiCon**. mobicon.org. Mobile AL. V. Mignona, J. Lewis, S. Clemens, P. Burns. SF, fantasy, comics, anime, gaming.
- 14-16—**Anime Central**. acen.org. aceninfo@acen.org. Hyatt O'Hare, Rosemont (Chicago) IL. Anime and manga.
- 21-23—**KeyCon**. keycon.org. Winnipeg MB. Czerneda, K.-A. Anderson, Red L. and Ed the Sock. Literary SF and fantasy.
- 21-23—**ImagICon**. imagicon.org. McWayne Science Center, Birmingham AL. A. Hammack, D. Taylor, J. F. Lewis, M. Weston.
- 27-30—**Anime Oasis**, 123 Sunnyside Dr., Caldwell ID 83605. (208) 794-2076. animeoasis.org. Grove Hotel, Boise ID.
- 27-31—**WisCon**, Box 1624, Madison WI 53701. (608) 233-8850. wiscon.info. M. A. Mohanraj, N. Okornfor. Feminism & SF.
- 27-31—**NakamaCon**, 631 Springbrook Circle, Deforest WI 53532. nakamacon.com. Madison WI. Suggs, LaJoice. Anime.
- 28-30—**Oasis**, Box 592905, Orlando FL 32895. oasfis.org. Lee & Miller, R. C. Livingstone, R. Balder. General SF/fantasy.
- 28-30—**MarCon**, Box 141414, Columbus OH 43214. W. Spencer, B. Tackett, T. Savini, S. McGuire. Horror and paranormal.
- 28-30—**ConQuest**, Box 36212, Kansas City MO 64171. conquestkc.org. M. Swanwick, T. Weisskopf. General SF/fantasy.
- 28-30—**CONDUit**, Box 11745, Salt Lake City UT 84177. conduit.sfcon.org. Hambly, K. Rand, K. Mar. General SF/fantasy.
- 28-30—**BayCon**, Box 62108, Sunnyvale CA 94088. baycon.org. Beagle, Tomomatsu, Lackey, Dixon. General SF/fantasy.
- 28-30—**TimeGate**, Box 500565, Atlanta GA 31150. timegatecon.org. A. Cartmel, D. Glynn, others. Dr. Who, Stargate, etc.
- 28-30—**AnImazement**, Box 31582, Raleigh NC 27622. animazement.org. Marriott City Center. Anime.
- 28-31—**BaltiCon**, Box 686, Baltimore MD 21203. (410) 563-2737. bsfs.org. Marriott, Hunt Valley MD. General SF/fantasy.
- 28-31—**MisCon**, Box 7721, Missoula MT 59807. (406) 544-7083. mlscon.org. Turtledove, S. Clemens. General SF/fantasy.
- 28-31—**MediaWest*Con**, 200 E. Thomas, Lansing MI 48906. mediawestcon.org. For old-school fans of media SF/fantasy.

JUNE 2010

- 4-6—**ConCarolinas**, Box 26336, Charlotte NC 28221. (803) 517-3928. concarolinas.org. Hilton Univ. Pl. Jerry Pourmelle.
- 4-6—**SoonerCon**, 6000 S. Western, Oklahoma City OK 73139. (405) 632-2848. soonercon.com. J. R. Lansdale, S. Rosen.
- 4-6—**Relaxacon**, Box 391596, Cambridge MA 02139. arisia.org. Dennisport MA. To plan next year's Arisia; all welcome.
- 4-6—**A-Kon**, 3000 Custer Rd. #270-337, Plano TX 75075. a-kon.com. Jody Lynn Nye, many others. Anime.
- 4-6—**SuperCon**, Box 4012, Ft. Lauderdale FL 33338. (954) 882-2050. floridasupercon.com. Miami FL. Media SF/fantasy.
- 4-6—**CryptiCon**, 331 Andover Pk. E. #305, Tukwila WA 98188. (206) 276-8122. crypticonseattle.com. Seattle WA. Horror.
- 11-13—**Sci-Fi SummerCon**, Box 957203, Duluth GA 20095. sfscon.net. Marietta (Atlanta area) GA. Media SF/fantasy.
- 18-20—**DuckKon**, Box 4843, Wheaton IL 60189. duckkon.org. Naperville (Chicago) IL. S. Lee & S. Miller, Talis Kimberley.

AUGUST 2010

- 5-8—**ReConStruction**, Box 31706, Raleigh NC 27612. reconstructions.org. The North American SF Convention. \$110.

SEPTEMBER 2010

- 2-6—**Aussiecon 4**, GPO Box 1212, Melbourne VIC 3001, Australia. aussiecon4.org.au. World SF Convention. US\$225.

AUGUST 2010

- 17-21—**RenoVation**, Box 13278, Portland OR 97213. rcfi.org. Reno NV. Asher, Brown, Powers, Vallejo. WorldCon. \$140+.

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